

elna 500
electronic



Dear Customer,

You have chosen a sewing machine of the highest quality which will turn your hours of sewing into hours of pleasure and relaxation.

We congratulate you on your choice and hope that it will give you lasting satisfaction.

ELNA SEWING MACHINE

Record in space provided below the Serial No. and Model No. of this appliance.

The Serial No. is located Rear of arm.
The Model No. is located Rear of arm.

Serial No. _____

Model No. _____

Retain these numbers for future reference.

TAVARO S.A., Geneva, Switzerland

Manufacturer of **Elna** sewing machines
and **Elnapress** ironing presses

Instruction Manual

**for Elna 500 electronic
sewing machines, classes 45 and 46**

Safety

In accordance with the recommendations of specialized safety, standards and electrical control authorities, the sewing machine must be disconnected from the main supply by removing the plug from the outlet socket whenever the machine is left unattended, when it is being serviced or whenever mechanical parts or accessories are replaced (see also page 36).

After-sales Service

If you should need any additional information, do not hesitate to ask your Elna dealer. His qualified staff will be pleased to answer your questions. In accordance with the terms of the guarantee, they are the only people authorized to attend to any mechanical adjustments on an Elna sewing machine.

General

All rights to make any modifications reserved.

This machine corresponds to the EEC regulations 76/889

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Instruction Manual

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Elna 500 duplex, electronic

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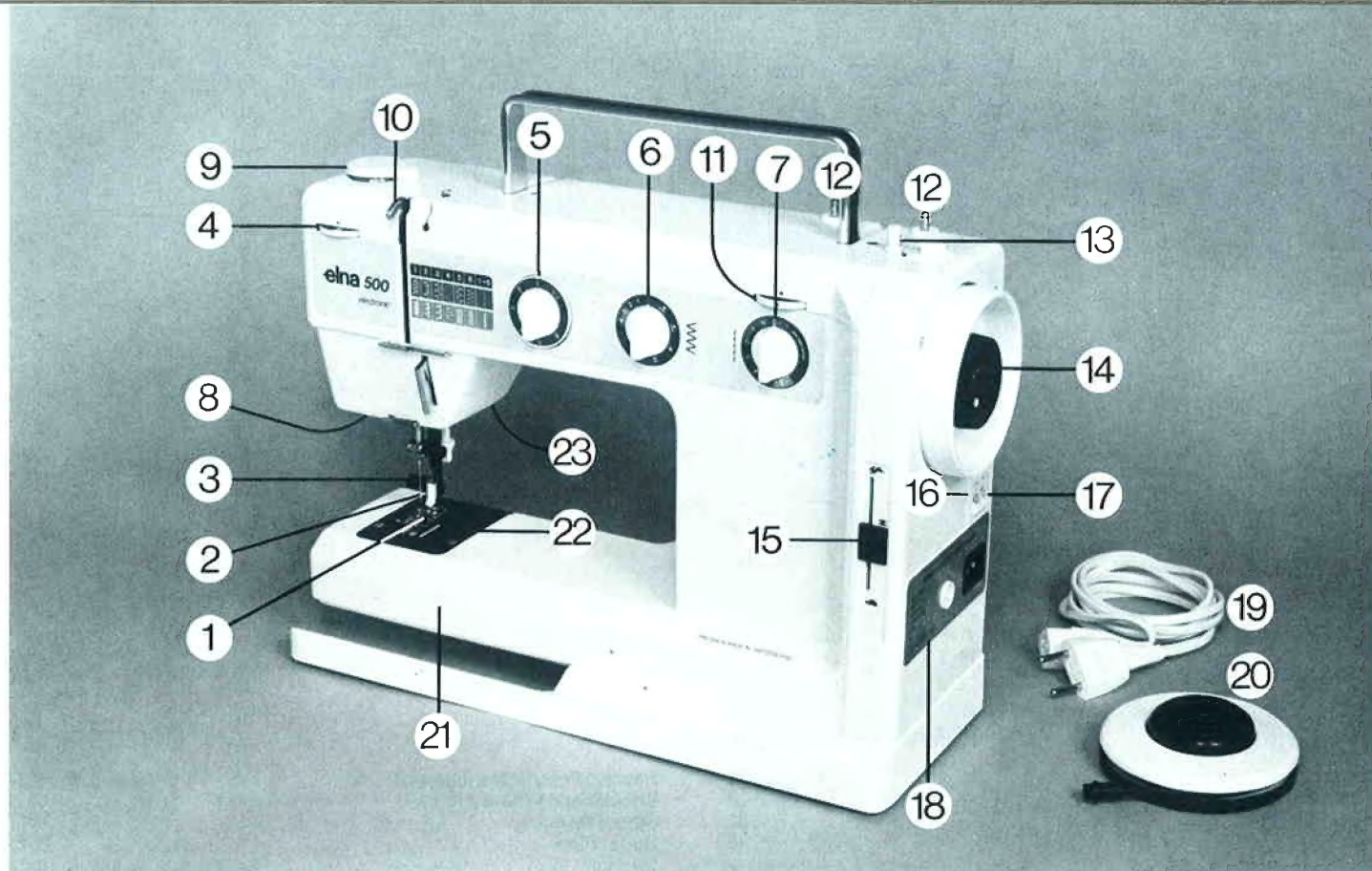
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Part I

Main Parts

The following are already in place on the machine, for normal, everyday sewing jobs:

- 1 A clip-on sewing foot for ordinary straight and zigzag seams.

The pressure of the sewing foot does not have to be adjusted; it is universal and has been set at the factory to cope with sheer as well as thick fabrics.

- 2 A no. 80 needle (medium size) – 130/705 H system.
- 3 Foot support fixing screw
- 4 The thread tension set at the “universal tension” position, figure 4 marked with a white band.

Other main parts of the machine.

- 5 Stitch selector.
- 6 Stitch width dial.
- 7 Stitch length dial.
- 8 Sewing light. Maximum input 15 w. The light switch is on the right end of the machine (17).
- 9 Upper tension.
- 10 Open thread take-up lever.
- 11 Wheel for elongating the superautomatic stitches
- 12 Retractable spool pins.
- 13 Bobbin winder.
- 14 Flywheel with instant disengaging and engaging mechanism.
- 15 Electronic speed reducer.
- 16 Safety power switch.
- 17 Light switch.

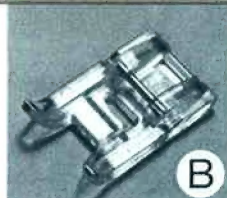
- 18 Specification plate.

Make sure that the voltage is the same as that indicated on the light bulbs in your home. If not, do not plug in the machine but contact your Elna service man.

- 19 Mains lead.
- 20 Air foot control (worked by air pressure).
- 21 Free arm.
- 22 Rotary hook cover. If you are using your Elna for the first time or have not used it for some time, open the cover and put a few drops of oil in the rotary hook, on the point marked in red (see page 8).
- 23 Presser foot lever.



425.752



425.771



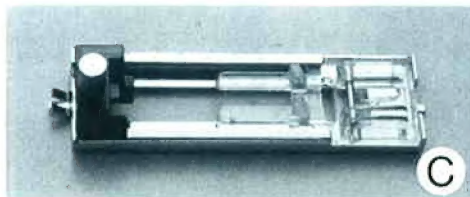
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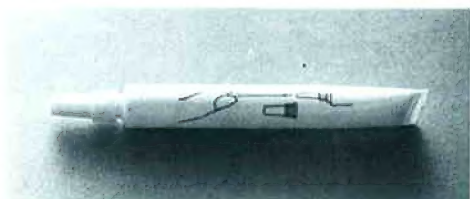
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Accessories

The accessories are neatly arranged in the accessory box.

You will find it easy to identify the various interchangeable clip-on feet as they bear identification letters A, B, C, etc.

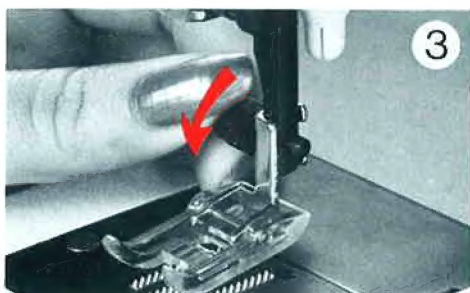
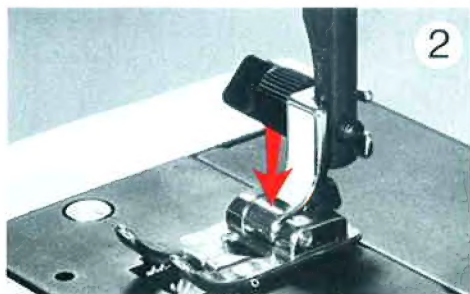
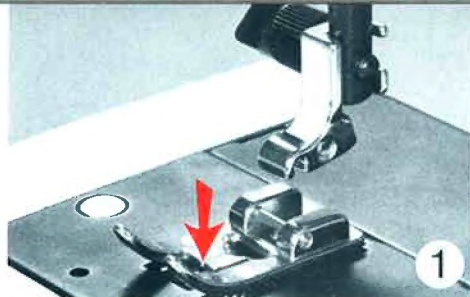
Already fixed on the machine are:

- 1 foot support 425.620
- 1 clip-on sewing foot A 425.752

In the accessory box you will find:

- 1 darning foot N 425.041
(Depending on country)
- 1 plate for darning and for sewing on buttons 424.110

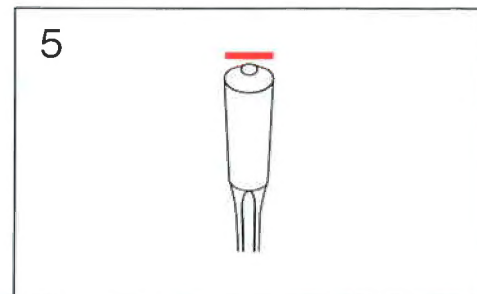
- 1 clip-on embroidery foot B 425.771
- 1 clip-on zipper foot D 425.791
- 1 clip-on blind stitch foot E 425.822
- 1 clip-on buttonhole foot, with slide C 425.672
- 5 bobbins (of which one already in the rotary hook) 426.000
- 1 screwdriver 426.121
- 1 buttonhole knife and seam ripper 426.132
- 1 tube of oil 426.350
- 1 needle threader 426.601
- 1 cleaning brush 426.111
- 1 gatherer for elastic (Depending on country) 426.550
- 1 assortment of needles



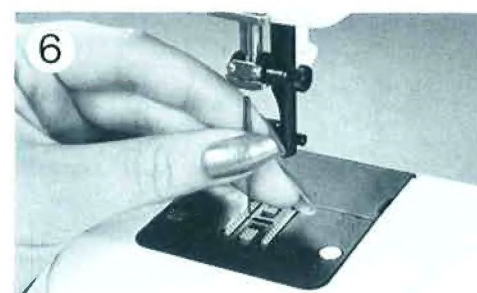
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5



6



Should you have to change the foot

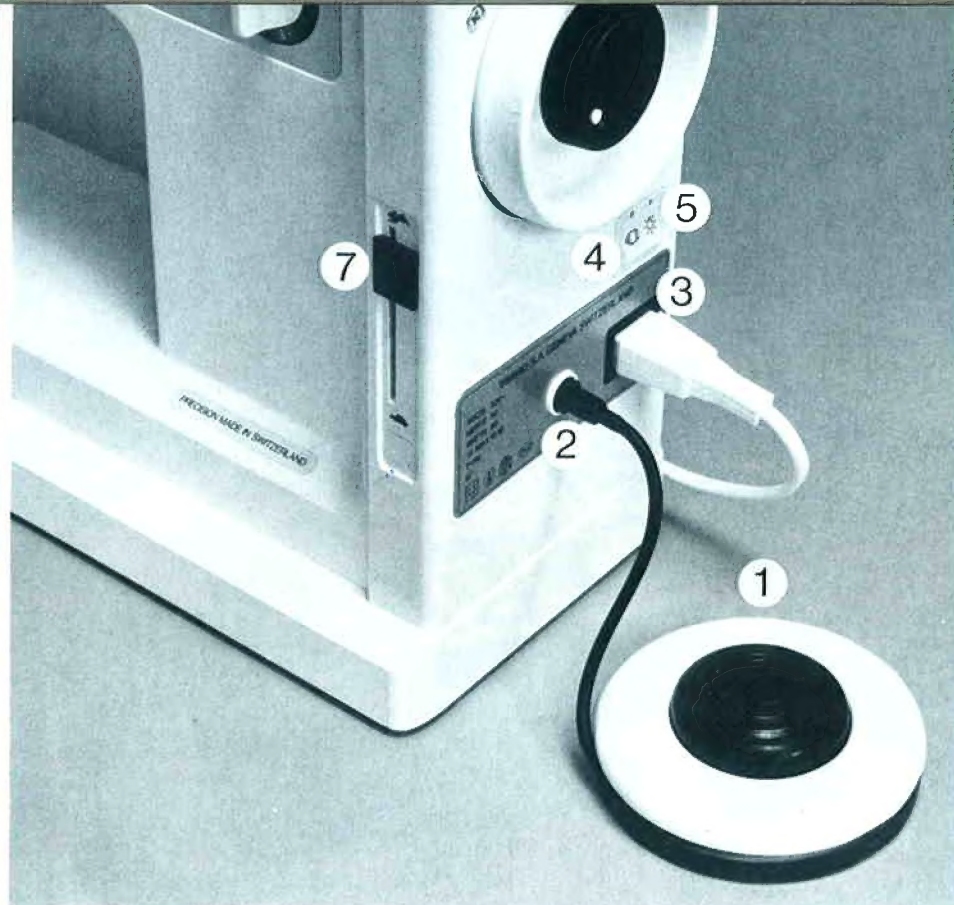
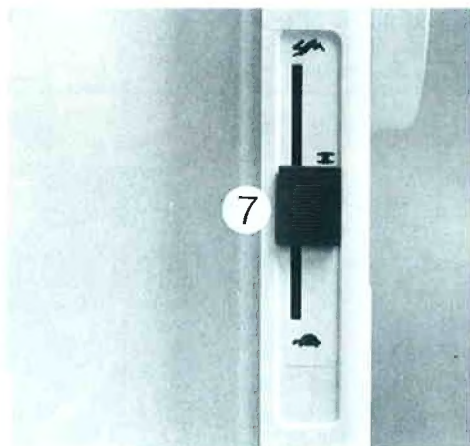
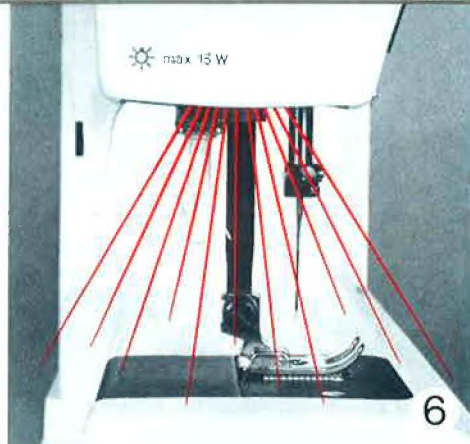
- 1 Raise the foot. By pressing downwards on the sole of the foot with the fingers, it is freed and can be removed easily.

- 2 Place the other sole under the foot support. Lower the foot and the sole will snap into place. (If necessary, press on the foot support with the fingers.)
- 3 If you use a foot that is attached in the conventional manner, the screw of the foot support can be unscrewed. Remove the support and screw on the foot in its place. Tighten the screw firmly.

For the darning foot, see page 24.

Should you have to change the needle

- 4 Use preferably ELNA needles of the system 130/705 H (15 × 1).
- 5-6 Hold the needle with its flat part against the index finger, facing the back, and push it as far as it will go into the needle clamp. **Tighten the screw firmly.** (It is not necessary to use a screwdriver).



Operation

1 Foot Control

The foot control is not electric. It is an **air foot control**. It controls, by air pressure, an **electronic device housed within the machine**, for regulating motor and sewing speeds; it can thus be termed combined air electronic operation.

2 Connect the nozzle with the machine.

3 Plug in the mains lead.

4 Safety Switch

If it is switched on, electric current is applied to the motor which is then ready to turn.

5 Light Switch

It is independent of the safety switch, which makes it possible to have the light on for preparing the work, changing the needle, etc., whilst the safety switch can remain switched off to avoid the risk of running the machine inadvertently.

6 **The Sewing Light Bulb** is situated in the head of the machine. The input of the light, which is marked on the machine, is 15w max.

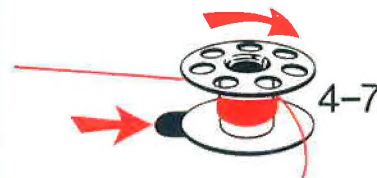
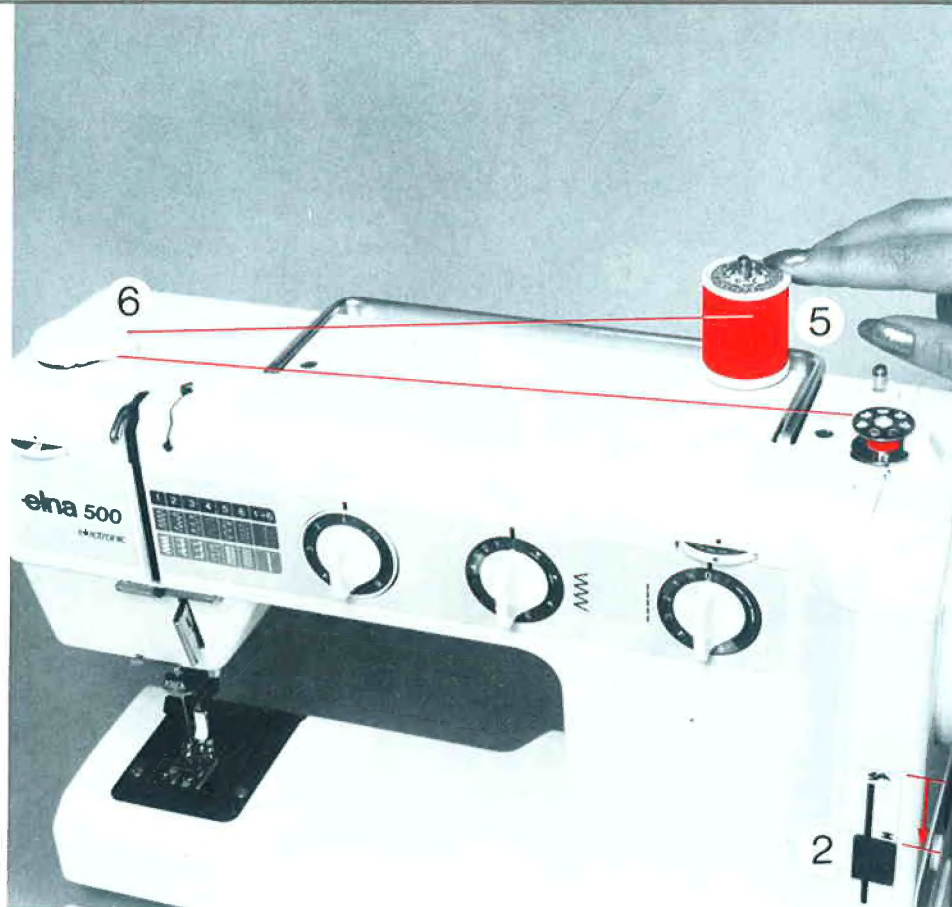
7 Electronic Speed Reducer

By means of this reducer, it is possible to set, before or during sewing, the maximum speed desired, by moving the sliding knob to a position selected between the maximum (hare) and minimum (tortoise).

The range of speeds is then controlled by the pressure exerted on the foot control (1). The greater the pressure, the higher the speed, until the maximum speed set by the sliding knob is reached.

Press preferably **with the sole of the foot** (and not with the toes).

To get used to the speeds, run the machine for a few turns (without thread).



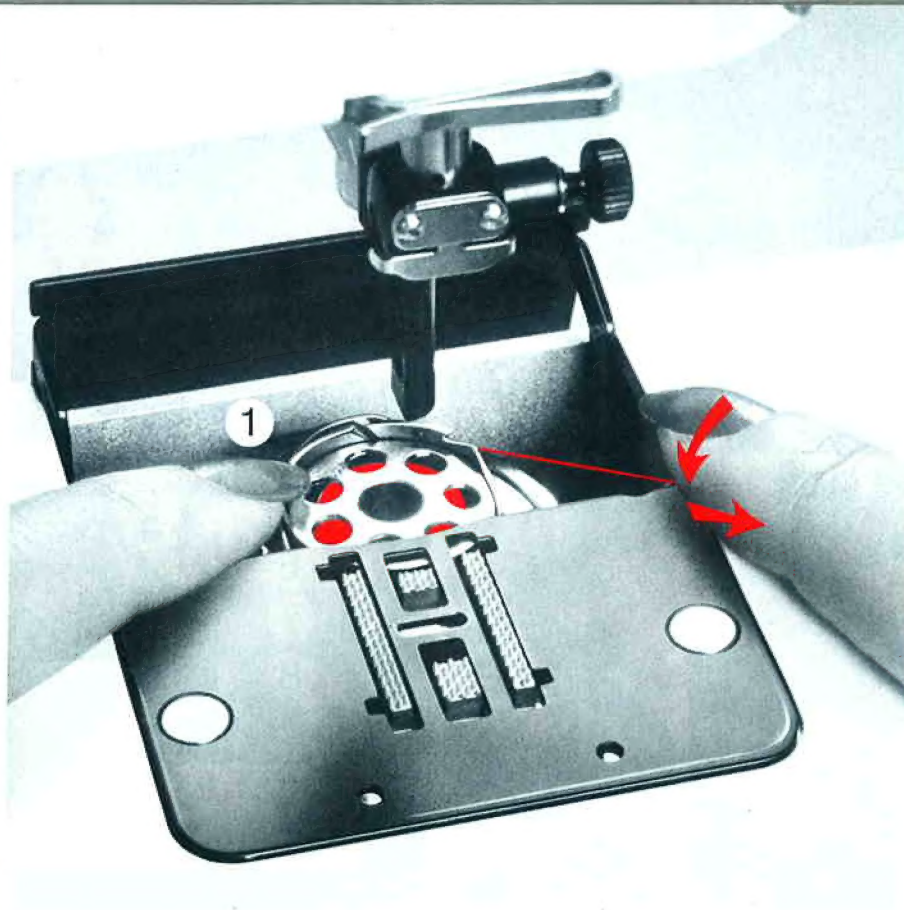
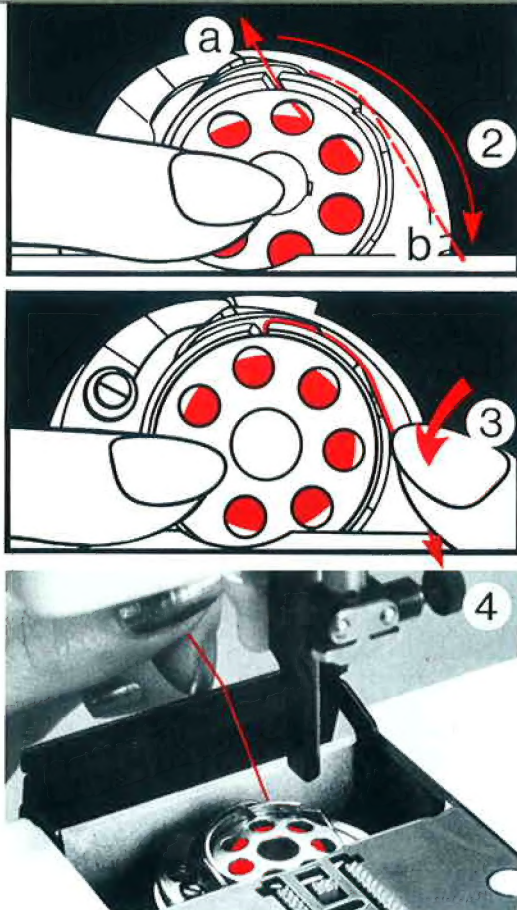
Lubrication

- 1 On principle, lubricate the machine before use. Use only the oil supplied with your machine (high grade sewing machine oil). Open the rotary hook cover, remove the needle plate and oil the point marked in red. There are no other lubrication points. To remove the needle plate, see under "Maintenance", page 36.

Winding the Bobbin

For normal sewing, use preferably medium size thread.

- 2 Slide the electronic speed reducer knob to the bobbin winding position "I".
- 3 **Disengage** the flywheel by retaining it and then simply turning the ring around the coupling hub towards you until the white button in the coupling hub pops out.
- 4 Place the bobbin, **holed side up**, on the bobbin winder and **push the bobbin winder to the right**.
- 5 Pull out one of the two spool pins and put the spool on it.
- 6 Pass the thread around the upper tension device. Note: **The thread take-up lever must be in its highest position.**
- 7 Wind a few turns of thread around the bobbin by hand in the direction shown. Run the machine. **The bobbin will stop automatically when it is full.**
- 8 **Engage** the flywheel simply by pressing the button (a). The flywheel will be engaged automatically.



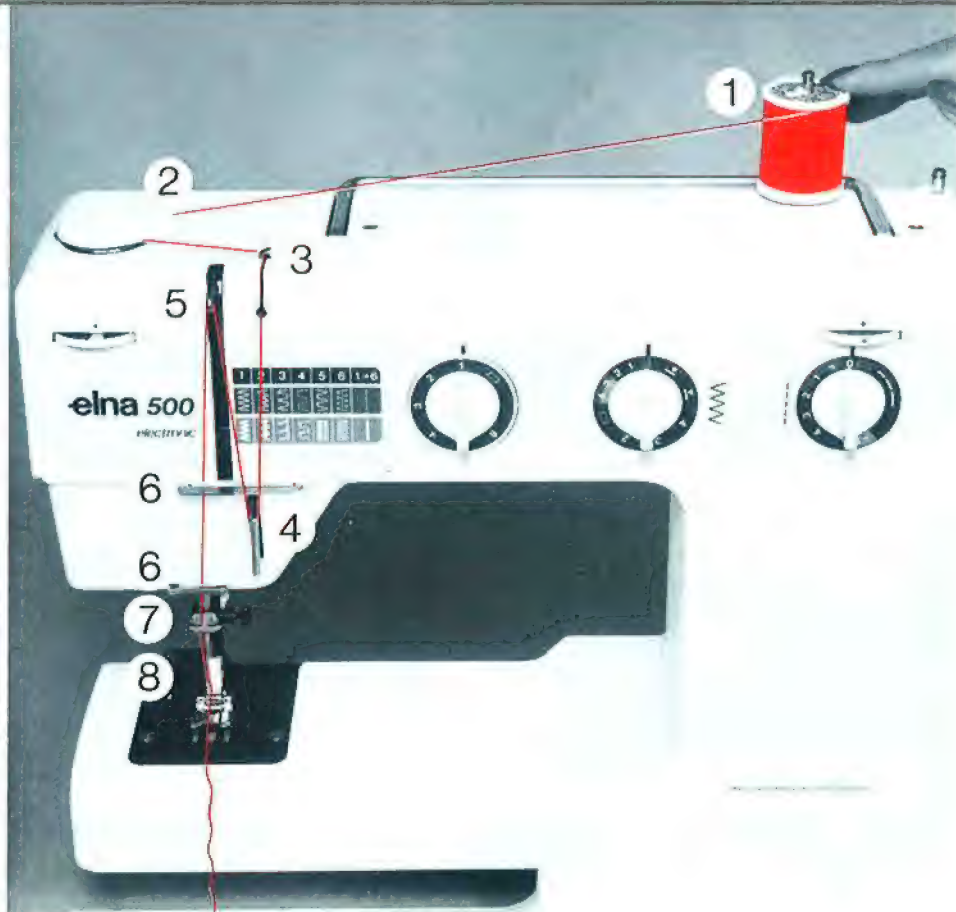
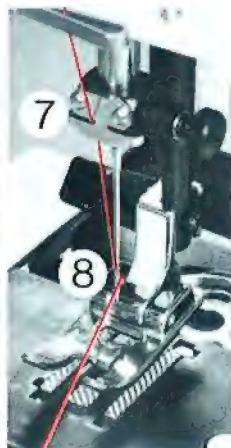
Inserting the Bobbin and Threading the Lower Thread

There is no bobbin case.

The bobbin is placed direct in the rotary hook, i.e. :

- 1 Open the rotary hook cover.
Drop the bobbin into the rotary hook, **holed side upwards**.
- 2 Retain the bobbin with the left index finger. Pass the thread through the slot (a). Bring it around to the front, at the angle indicated (b).
- 3 Continue to retain the bobbin. By pulling the thread and by pressing it downwards with the index finger, it will snap into the tension device.

4 Immediately check that the thread will not come out of the tension device by pulling it gently upwards. It should not come out of the slot (2-a). If it does, repeat the operations explained under 2-3. Leave about 15 cm (6'') of thread at the back.

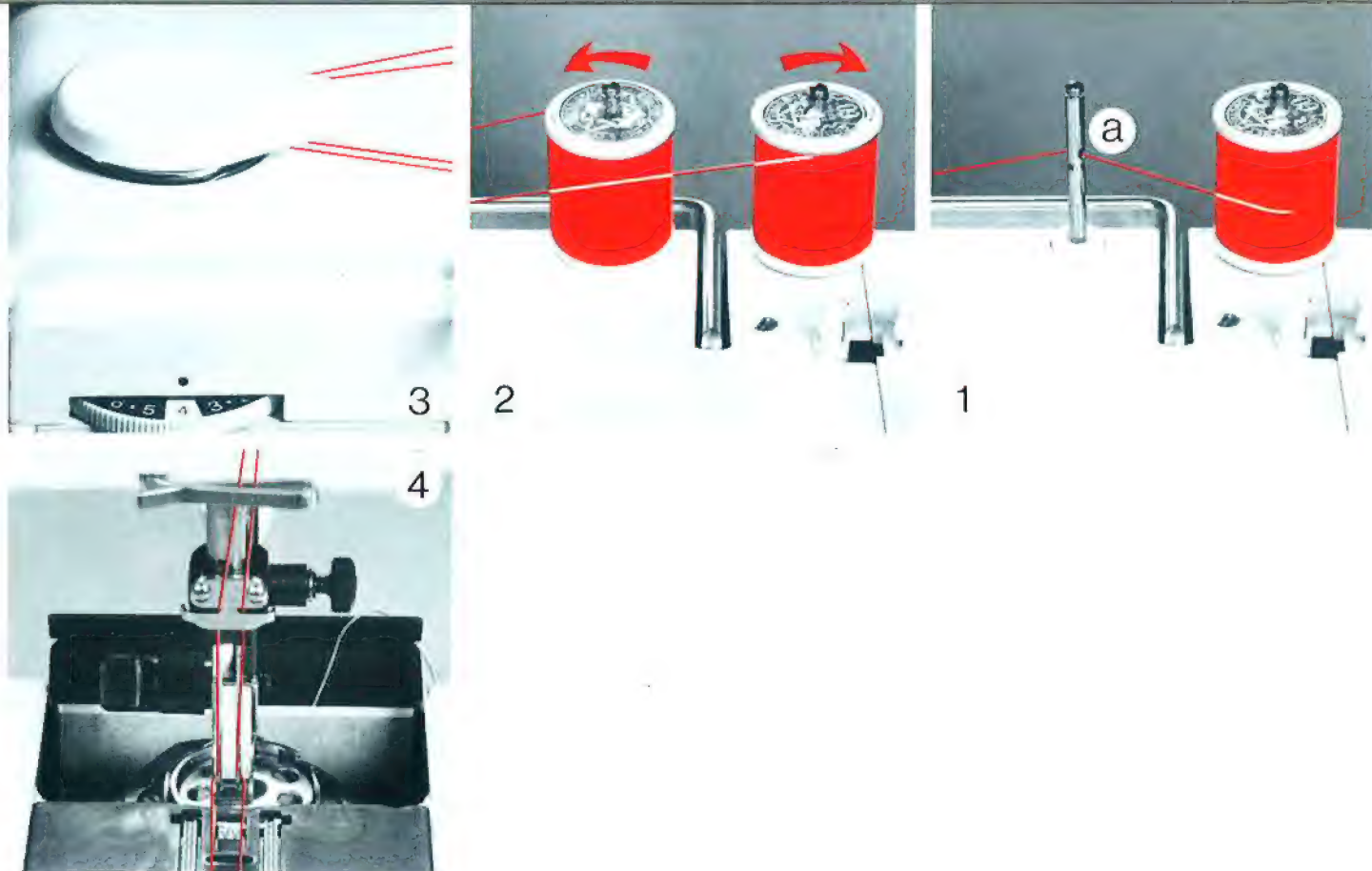


Threading the Upper Thread

Make sure that the thread take-up lever and the foot are raised.

- 1 Pull out the spool pin and place the spool on it. Hold it back with the tip of your finger and pass the thread through the passages in the following order (all the thread passages are open, including the thread take-up lever):
- 2 Upper tension.
- 3 Thread guide.
- 4 Check spring.
- 5 Thread take-up lever – Pass the thread through at the rear of the notch in the cover, **from right to left**, passing it behind the thread take-up lever. The thread will slip into the opening of the thread take-up lever.
- 6 Two thread guides.
- 7 Needle clamp. Pull the thread well into the clamp.

- 8 Needle (**it is threaded from the front to the back**). The white area on the foot support (behind the needle) makes it easy to see the eye of the needle.
- 9 If you use the needle threader, you should thus insert it into the eye of the needle from the back then pass the thread into the threader and pull the latter to the back, out of the eye.



Threading when using the Twin Needle

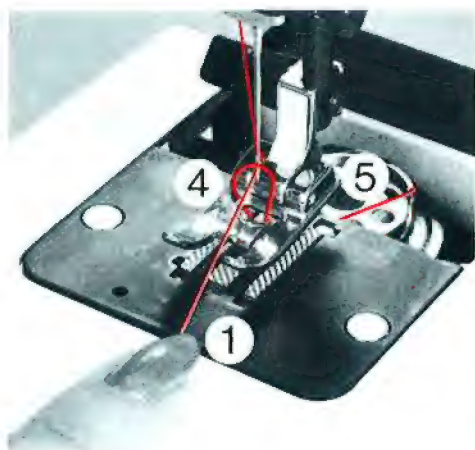
(See extra accessories, page 32.)

- 2 Pull out the two spool pins and place a spool of thread on each so that one comes unwound in the opposite direction to the other.
- 3 Pass one thread above the separating disc of the upper tension device and the other below.
- 4 Continue in the same way as for a single thread, but pass one thread through each side of the needle clamp and each eye of the needle.

1 Threading Very Slippery Threads

(synthetic threads in particular)

Certain very slippery threads can tend to fall in spirals from the spool onto the machine. To avoid this, pull out the second spool pin and pass the thread through the hole (a). Next, thread in the usual way.

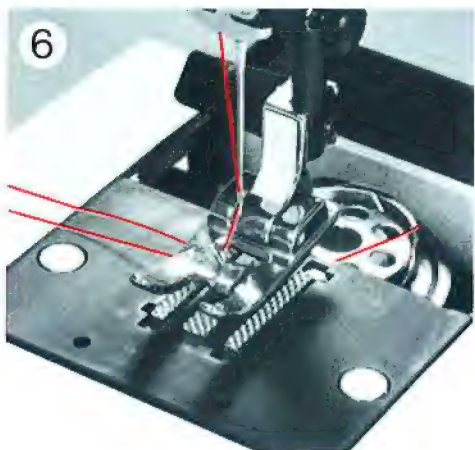


Drawing up the Lower Thread

- 1 Leave about 15 cm (6") of upper thread in front of the needle and hold it with your index finger against the edge of the needle plate.
- 2 Turn the flywheel one full turn (towards you), by hand.

- 3 This makes the thread take-up lever descend and return to its highest position and will draw up the lower thread—(4).
- 4 Free the loop of thread by hand.

- 5 Make sure that the thread crosses the hook and the bobbin correctly. Close the rotary hook cover.



6 Leave about 15 cm (6") of each thread **to the side**, passing them under the presser foot. You are now ready to start sewing.

Universal Upper Tension

7 It is denoted by a white band between the figures $3\frac{1}{2}$ - $4\frac{1}{2}$ and makes it possible to do most sewing jobs without changing the tension.

For possible adjustments :

Turn the tension wheel to between 4 and 9 to obtain a stronger tension. Turn the tension wheel to between 4 and 1 to obtain a weaker tension.

See also page 29.



Selection and Adjustment of the Stitches in accordance with the "Synchrocolor" System

- 2 The stitch selector,
- 3 the stitch width dial and
- 4 the stitch length dial
- are provided with colour codes.

By turning the dials to the colours corresponding to the colour of the stitches indicated on the selector panel (2), the most common basic adjustments are synchronized.

The stitches that can be sewn with the Elna 500 electronic are as follows:

- The built-in automatic stitches which are marked in green on the selector panel (2). These are the stitches which form the single sewing programme, i.e.:

- ~~~~~ Zigzag stitch
- ~~~~~ Elastic blind and edging stitch
- ~~~~~ Standard blind stitch
- ~~~~~ Overcasting stitch
- ~~~~~ Interlock
- ~~~~~ Special Overcasting
- Straight stitch (marked on the stitch width dial)

Example:

Overcasting stitch

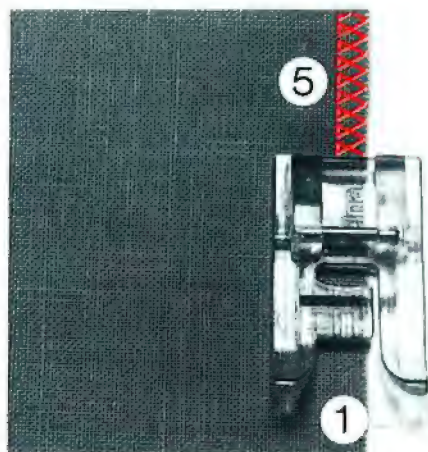
- 1 Use the clip-on sewing foot A.
- 2 Turn the selector to the overcasting stitch "~~~~~" marked in green.
- 3 Turn the stitch width dial to 4 (green zone—which corresponds to the width used most often for the single automatic stitches).
- 4 Turn the stitch length dial to $\frac{1}{2}$ - $\frac{3}{4}$ (green zone—which is a length used frequently for the single automatic stitches).
- 5 You will then obtain an ideal overcasting stitch, sewn really flat, without curling up the fabric.

N.B.: Depending on the stitches, the stitch widths and lengths can also be set beyond the coloured zones, between 1 and 4.





To remove the work from under the foot :
see page 16.




– The built-in superautomatic stitches which are marked in red on the selector panel (2). These are the stitches which form the double sewing programme, i.e. :

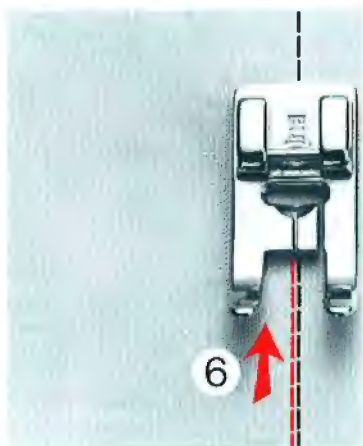
-  Triple zigzag stitch
-  Decorative stitch
-  Edging stitch (superstretch stitch)
-  Jersey stitch
-  Overlock stitch
-  Tricot stitch
-  Triple seam (marked on the stitch width dial)

Example :

Overlock stitch for assembling and over-casting

- 1 Use the embroidery foot (B).
- 2 Turn the selector to the overlock stitch "  " marked in red.
- 3 Turn the stitch width dial to 4 (red zone, which corresponds to the width used most often for superautomatic stitches).
- 4 Turn the stitch length dial to "S", red zone.
- 5 You will then obtain an overlock stitch which sews and overcasts at the same time.

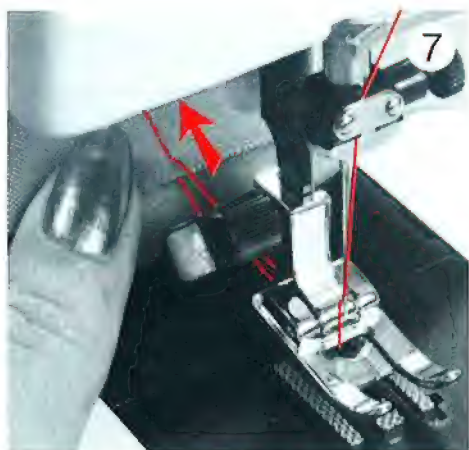
The other built-in red stitches shown on the selector panel are adjusted in the same way. Try them out on a double layer of fabric.



Sewing with the "green" automatic stitches

Use preferably

- the clip-on sewing foot A for straight and linear stitches and
- the clip-on embroidery foot B for closely sewn stitches (satin, edging, scallops, etc.).



- Run the threaded machine only with material properly placed under the foot and after having lowered the foot.

To start sewing, lower the needle into the material and **hold back the two threads while sewing the first two or three stitches.**

- 1 Guide only by following the material along the foot with the fingers, without holding it back (do not pull the material from behind). At the same time, carefully observe the seam. You can thus keep a check on your sewing, without any risk of pricking your fingers accidentally.

Sewing with Straight Stitches, Forwards

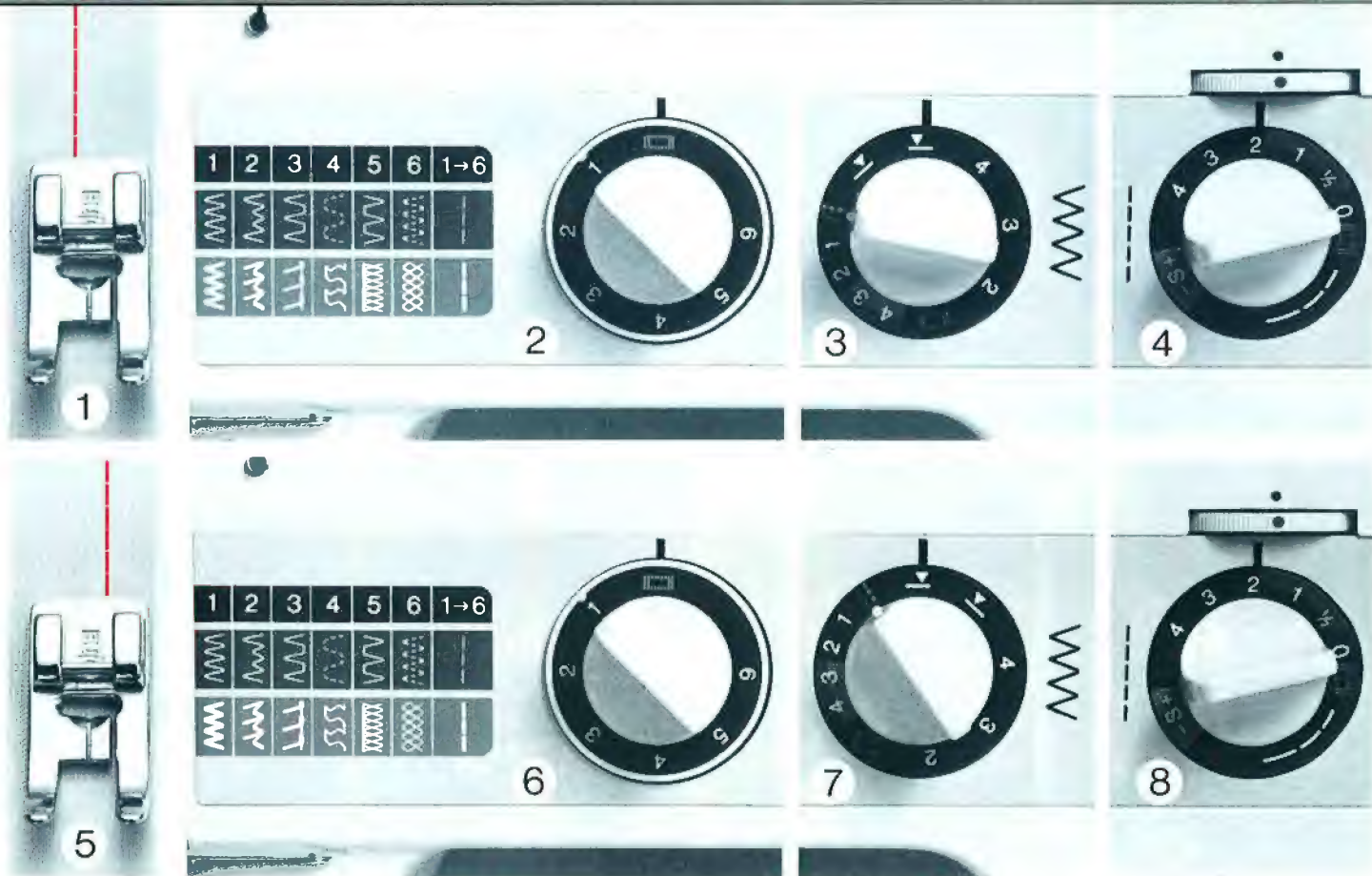
- 2 Leave the stitch width dial at "1".
- 3 Turn the stitch length dial to between 1 and 4, depending on the length desired.
- 4 You will then sew straight stitches 1 to 4 mm long, depending on the work or on the fabric.

Reverse Sewing with Straight Stitches

5 and 6 For reverse sewing, turn the stitch length dial to the stitch symbols "↔". It is possible to sew backwards with stitches of various lengths.

Removing the Material

- 7 To remove the material, first turn the flywheel towards you, by hand, to raise the thread take-up lever to its highest position. This is essential to finish the stitch. It is also important as it will ensure that the next seam can be started easily. Raise the presser bar lever (foot). Pull out the material towards the rear and cut the threads with the thread cutter on the cloth presser bar.



Changing the Bobbin

9 With the rotary hook cover open and the foot raised, insert the bobbin extractor (which is situated just above the rotary hook) into the centre of the bobbin; when it is released, the bobbin is removed automatically.



Decentring the Needle for Straight Sewing

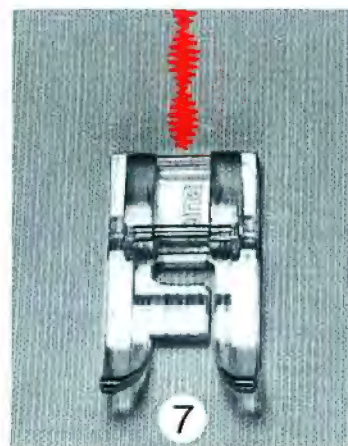
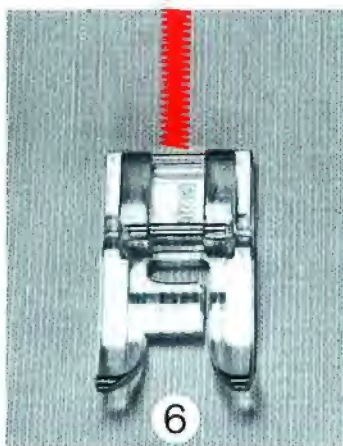
Decentre the seam to the left or right for sewing sheer, very soft or limp fabrics, as well as for sewing at a small distance from the edge of the work whilst keeping the fabric well under the foot.

1 To decentre to the left

- 2 turn the selector to the buttonhole position
- 3 the stitch width dial to the left decentring position "▼"
- 4 the stitch length dial to the length required.

5 To decentre to the right

- 6 turn the selector to one of the stitch patterns
- 7 the stitch width dial to the right decentring position "▲"
- 8 the stitch length dial to the length required.



Sewing with the Zigzag Stitch

Fast Overcasting

- 1 Stitch selector turned to zigzag "Z".
- 2 Stitch width dial between 2 and 4, as required.
- 3 Stitch length dial between 1 and 3, as required.
- 4 **For medium weight or heavy materials,** guide the edge of the material along the middle of the foot, in accordance with the guide mark on the foot – stitch width 4, stitch length 1. On the right, the needle will sew off the edge and very pretty overcasting will be made with a finished width of 2 mm ($\frac{1}{16}$ ").

Satin Stitch

- 6 To obtain a lovely satin stitch, use the clip-on embroidery foot B
 - 1 Stitch selector turned to zigzag "Z" (green).
 - 2 Stitch width dial between 2 and 4.
 - 3 Stitch length dial between $\frac{1}{2}$ and $\frac{1}{4}$.
- Turn the stitch length dial to $\frac{1}{2}$ and gradually reduce the stitch length until you have a sufficiently close satin stitch.

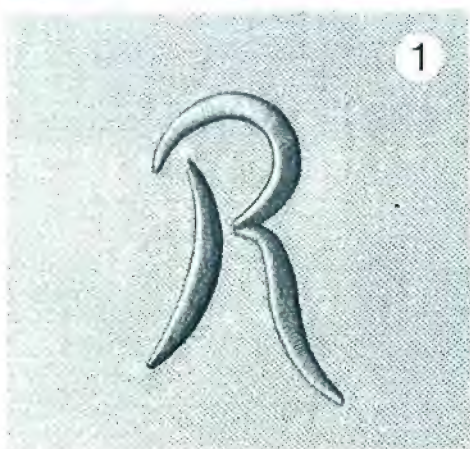
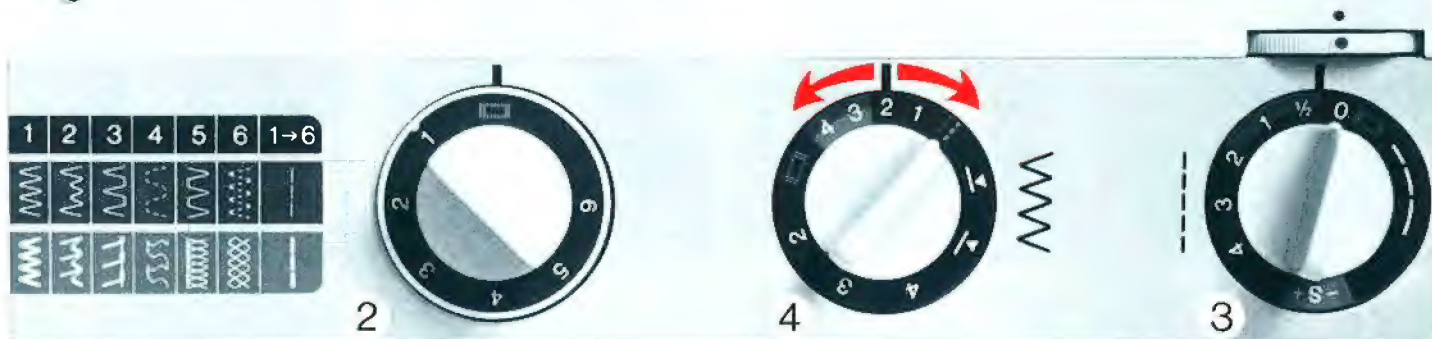
The satin stitch adds a decorative finish to the hems of sheets, pillow-cases, table-cloths, cushions, monograms, etc.

Tapered Satin Stitch

Adjust the satin stitch as shown opposite.

- 7 By then turning the stitch width dial by hand between 1 and 4 while the machine is running, you will sew a satin stitch tapered as desired.

N.B. : Reinforcement : To embroider satin stitches and tapered satin stitches, reinforce the underside of the material with paper. Tear off the paper after the embroidery has been completed.



Tapered Satin Stitch, Decentred to the Left

It is also possible :

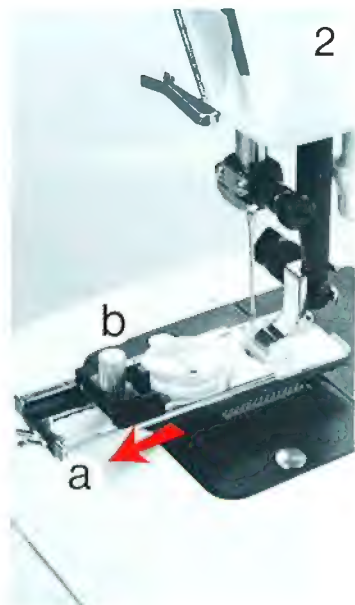
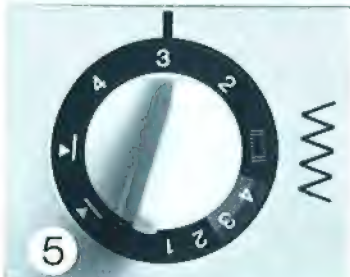
- 1 to sew a tapered satin stitch decentred to the left,
- 2 by turning the selector to the buttonhole position,
- 3 and the stitch length dial to $\frac{1}{2}$ - $\frac{1}{4}$ (green zone).
- 4 By turning the stitch width dial by hand between 1 and 4 **while running the machine**, you obtain a tapered satin stitch decentred to the left (1).

This can be useful for monograms, for example, and for decorative sewing.

N.B. : Preferably use an embroidery hoop. Failing that, reinforce the underside of the material with paper, if necessary, and tear off the paper after having embroidered.



1



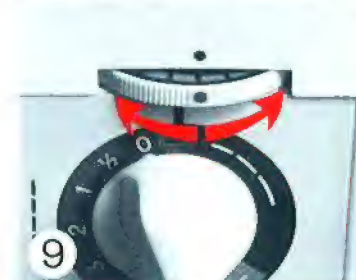
2



Automatic Buttonhole

When making this 4 mm ($\frac{3}{16}$ " wide buttonhole, it is not necessary to turn the work around the needle. Try it out on a scrap of material, in the same way as the buttonholes to be made in the finished garment.

- 1 Mark the positions of the buttonholes on the fabric.
- 2 Use the buttonhole foot with slide C. With the foot raised, pull the slide towards you, as far as it will go (a). Put one of the buttons for the garment (or a button of the same size) on the slide, in front of the foot, then push the stop-screw (b) against the button and tighten it. Remove the button. The slide will stop automatically when the length of the buttonhole corresponding to the size of the button is reached.
- 3 **Turn the 3 dials** (for stitch selection, width and length) to the **buttonhole** position, marked in blue. Also turn the elongation wheel, so that the blue dot is opposite the white guide mark (the engagement is felt slightly with the tip of the finger). Place the work under the foot. **Make sure that the slide is pulled well towards you (fig. 2 a)**; it should touch the rear of the foot support. Lower the foot. Sew the first side. Stop sewing **immediately** when the slide stops. Raise the needle.



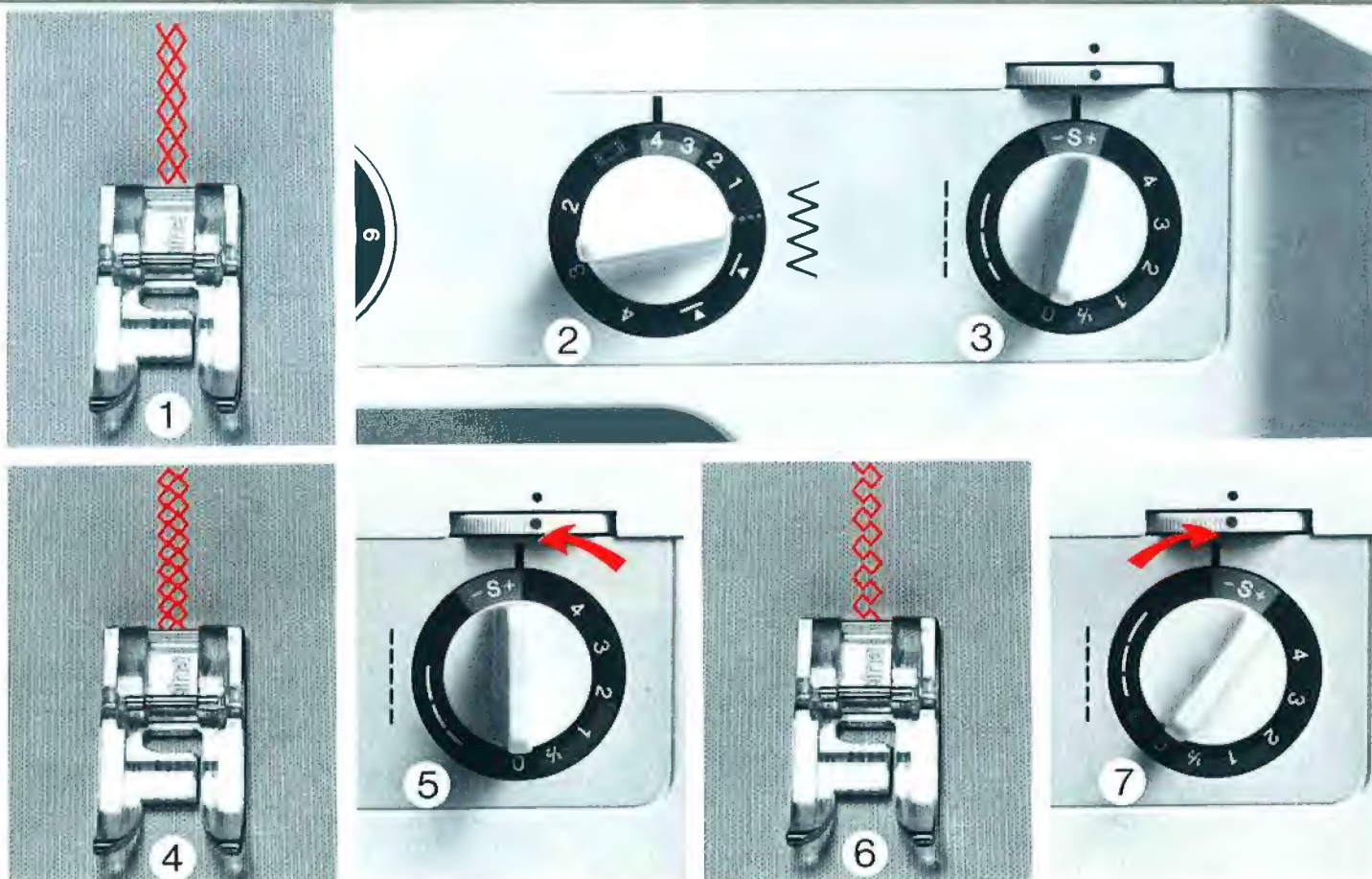
- 4 Turn the stitch width dial to 2, **blue**. Sew a few stitches. Raise the needle.
- 5 Turn the stitch width dial to 3, **blue**. Sew the second side. Stop sewing **as soon as** the slide stops. Raise the needle.
- 6 Turn the stitch **width** dial to 4, **blue**. Sew a few stitches. Raise the needle.
- 7 Turn the stitch **width** dial to the blue fastening-off position "▼". Sew a few stitches, holding back the material by hand.
- 8 Cut open the buttonhole.

IMPORTANT: If you are sewing thick woollen or knitted fabric, **slide a piece of paper underneath, between the feed dog and the fabric**, and the buttonhole will be sewn correctly. Tear off the paper after sewing.

Fine Adjustments :

- 9 A closer zigzag can be obtained by turning the **elongation wheel** to the thin dashes, and a more open zigzag by turning the wheel to the thick dashes.
- 10 If, depending on the fabric, **the second side** is not identical to the first, you can correct it by means of **the stitch length dial** :
 - by turning it towards "0", the zigzag becomes closer,
 - by turning it away from "0", the zigzag becomes more open.

N.B.: It is also possible to sew or repair buttonholes without putting a button in the slide. The user keeps a check on the length of the buttonhole herself and stops sewing when the required length is reached.



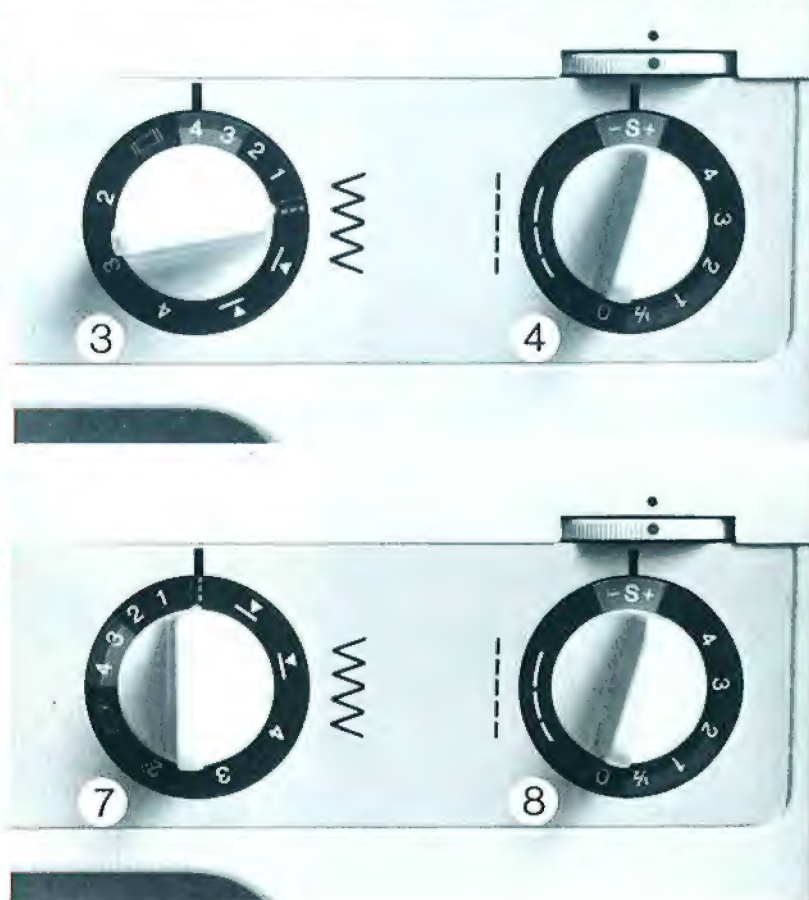
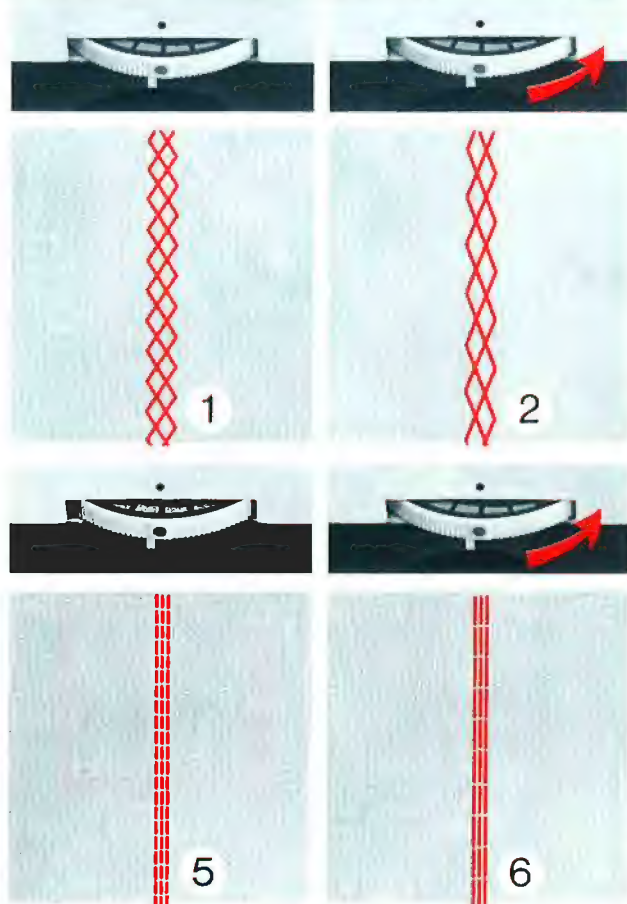
Sewing with the "red" Superautomatic Stitches

- 1 Use on principle the **clip-on embroidery foot B** (unless indicated otherwise).
– Turn the selector to tricot stitch "⌘".
- 2 Turn the stitch width dial to 4, red zone.
- 3 The stitch length dial to "–S+" red zone.
This is the way to sew the tricot stitch.

Stitch Tuner

On principle, all the stitches are formed perfectly. Nevertheless for certain particularly intricate stitches it may be advisable to lengthen or shorten them to adapt them better to the kind of thread and material being used.

- 2-3 With the stitch length dial at "S", the stitch length should normally be correct (1).
- 4-5 If on "S" the stitch is too short, turn the dial a little towards "+"
- 6-7 If on "S" the stitch is too long, turn the dial a little towards "–"




Example :

Tricot Stitch

1 With the elongation wheel set at the blue dot,

Turn :

– the selector to “” tricot stitch,

3 the stitch width dial to 4, red zone,

4 the stitch length dial to “S”, red zone.

1 and the tricot stitch is obtained in its original size.

If an elongated version is wanted,


2 turn the elongation wheel gradually to the thicker dashes to obtain the length desired.

Depending on the stitch and the fabric, the elongated stitch can be adjusted even more finely with the stitch tuner by turning the stitch length dial (4) a little to “–S” or “S+”.

Elastic Triple Seam

• With the selector on one of the 6 stitch-positions,

• and the elongation wheel set at the blue dot,

7 turn the stitch width dial to “”, elastic triple seam,

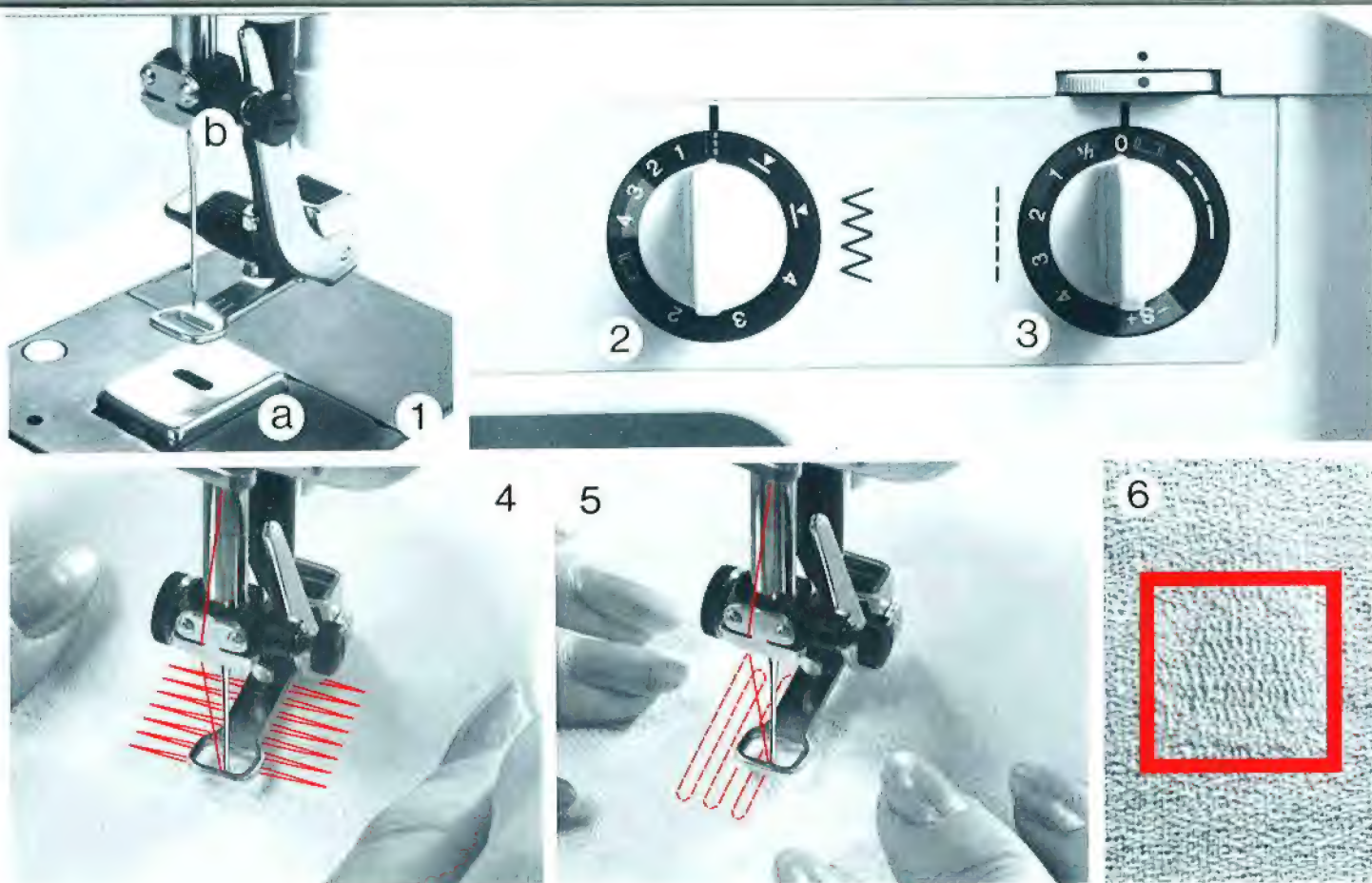
8 the stitch length dial to “S”, red zone.

5 A reinforced elastic triple seam is thus obtained, for working clothes, topstitching, etc.

6 It can also be elongated by turning the elongation wheel to the thicker dashes.

Elongation of the “red” Superautomatic Stitches

When using red stitches, it is possible to obtain designs which can be elongated to up to twice their original length.



Sewing with Other Feet and Accessories

Sewing with the Darning Foot N and Plate

(Extra accessory depending on the country or the model)

Use darning thread.

Remove the foot support—see page 6.

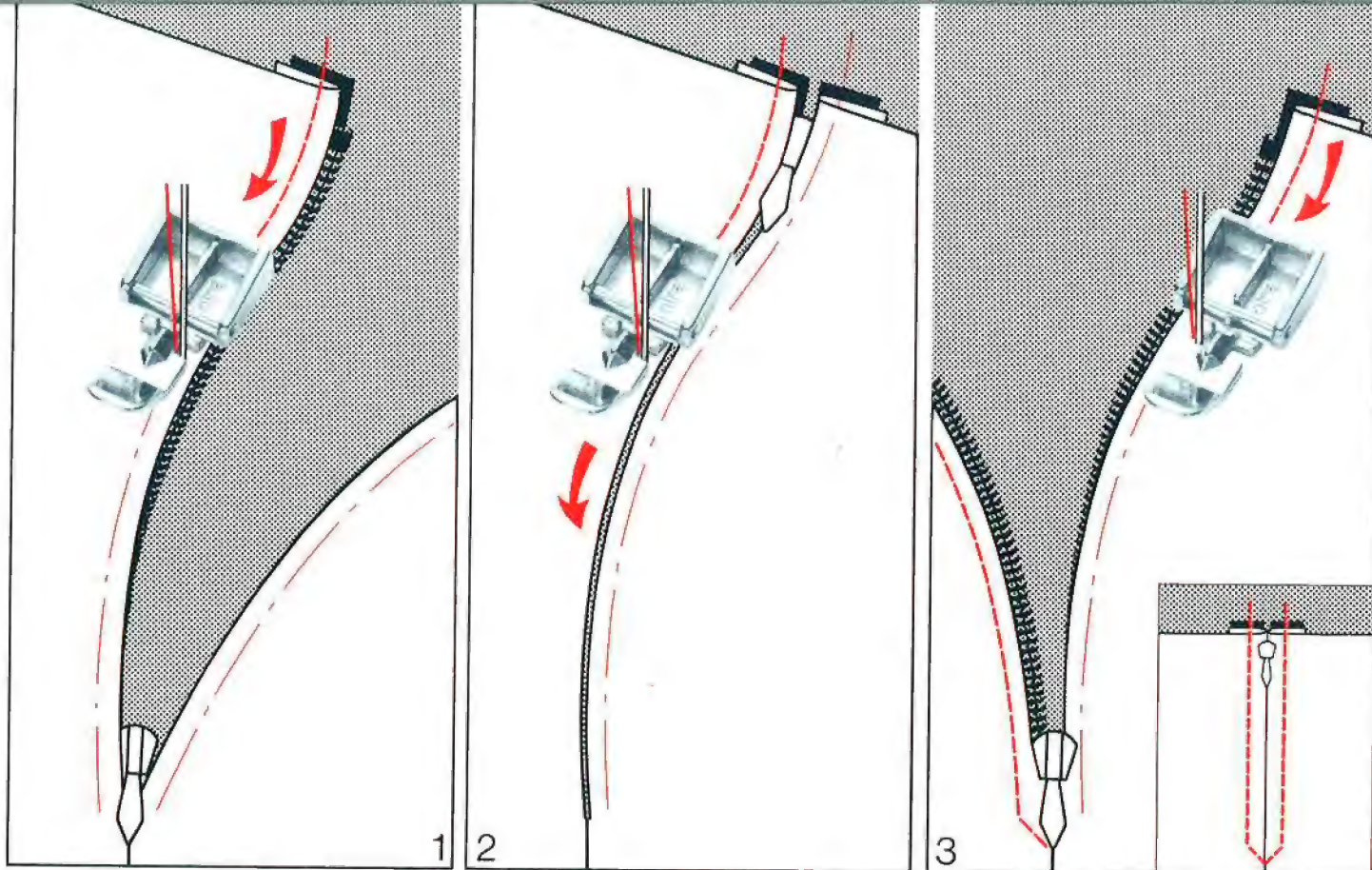
- 1 Put the darning plate (a) in place, then the darning foot. The darning plate makes it easier to darn without a darning hoop, by covering the teeth of the feed dog. The foot is **attached from the rear**. The lever of the foot rests against the rear of the needle clamp stud (b).

- 2-3 Turn the stitch width dial to "1" and the stitch length dial to "0".

Lower the foot before darning.

- 3 Stretch the material tightly with your hands and sew a screen of close stitches, moving the material from right to left and vice versa.
- 4 Keep your fingers as close to the darning plate as possible and secure the screen in parallel wavy lines, moving the material **forwards and backwards**.

For very worn material, we recommend the darning plate with a round hole – see extra accessories, page 33.



Zip Fastener

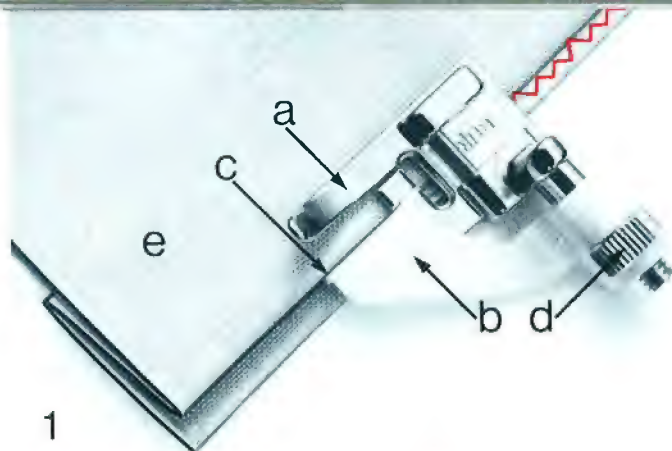
with the clip-on zipper foot D.
(Extra accessory depending on the country or the model)

- 1 This foot can be positioned to the left (fig. 1) or right (fig. 3) of the needle by fitting the foot support into the left or right slot in the sole. This makes it possible to sew without turning the work around, by sewing the fastener once on one side of the foot and once on the other.

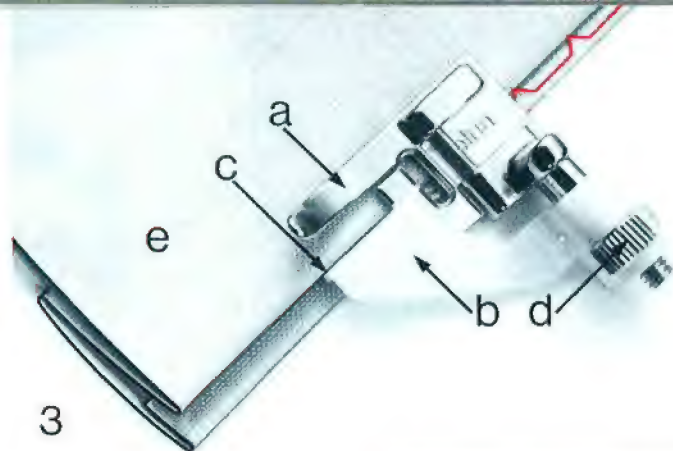
- Stitch width dial on "1", stitch length dial between 1 and 3.

Baste on the fastener, folding the opening as shown in the sketch. Leave the fastener open and sew from the opening to the point.

- 2 When the middle of the seam is reached, let the needle pierce the material, raise the foot and close the fastener by pulling the slide. Lower the foot and continue to sew up to the point.
- 3 After having sewn one side, draw the work (and the fastener) back towards you, **move the sole to the other side of the needle** and sew the other side from the opening to the point of the fastener.



1



3

2

4

Hems with :

the Clip-on Blind Stitch Foot E

- This foot is used for sewing a hem easily and evenly with the blind stitch.
- Place the fabric under the foot, wrong side up, folded as shown in the illustrations (1 or 3).

Special points :

- Wrong side (e).

The material should pass under the foot (a) and under the guide (b).

The fold passes under the sole (a), **but over** the lug of the guide (c). It presses against the guide.

By turning the adjusting nut, it is possible to move the guide to the right or left for stitching the fold (c) without piercing the material, but by catching just one or two fibres.

Blind Hems in Woollen and Jersey Fabrics using the Clip-on Blind Stitch Foot E

Turn

- the selector to elastic blind stitch "w" green
- the stitch width dial between 2-4, green zone
- the stitch length dial between 1-2, green zone.

1 Place the material wrong side up, folded as shown in the illustration. Make sure that only the wide zigzag just catches the fold of the material (c). Possibly move the guide a little by turning the adjusting nut (d). Sew, making sure that the fold (c) is kept evenly against the guide.

2 When the sewing is finished, open out the work and iron it.

Using this stitch, the blind hem is sewn and overcast in a single operation. This seam remains stretchable.

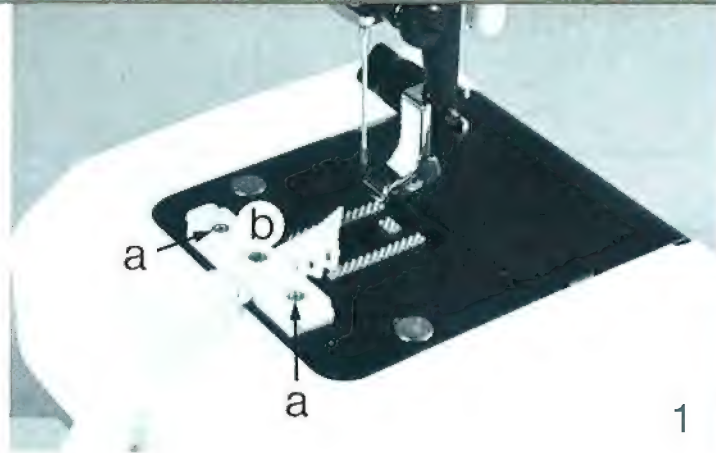
Blind Hems in Cotton Fabrics using the Clip-on Blind Stitch Foot E

Turn

- the selector to blind stitch "z" green
- the stitch width dial between 2-4, green zone
- the stitch length dial between 1-2, green zone.

3 Place the material wrong side up, folded as shown in the illustration. When sewing, make sure that the zigzag stitches are sewn to the left, just inside the fold of the material (c). Possibly move the guide a little by turning the adjusting nut (d). Sew, making sure that the fold (c) is kept evenly against the guide.

4 After sewing, open out the work and iron it.



Gatherer for Elastic

(Extra accessory, depending on the country)

Embroidery foot, selector on overcasting stitch, stitch width 4, stitch length $2\frac{1}{2}$ - $3\frac{1}{2}$.

For gathering lingerie fabrics and fabrics of medium thickness. It is used with elastic 4 to 6mm ($\frac{1}{8}$ " to $\frac{1}{4}$ " wide which is stretched automatically during sewing.

Fig. 1 – Cut the end of the elastic on the bias and insert it into the slit of the gatherer. (If necessary, loosen the adjusting screw (b)).

Fit the two studs (a) into the two holes specially provided for this purpose in the needle plate. Press on the ends of the gatherer to make sure that it is firmly in place.

Pull the elastic until it is under the needle. Tighten the adjusting screw (b) to hold the elastic.

Fig. 2 – Gathering

Place the material under the foot, on the elastic. Lower the foot. Sew. Test sew first on a scrap of material.

If the gathers are not sufficiently pronounced, tighten the screw (b) and possibly lengthen the stitch.

Part II

Additional Information

Needle, Thread and Fabric

It is preferable to use good quality dull or mercerized thread. For darning, left-twist thread is stronger. Remember that dry thread becomes brittle. The best sewing machine will give poor results if a bad needle is used.

A Golden Rule :

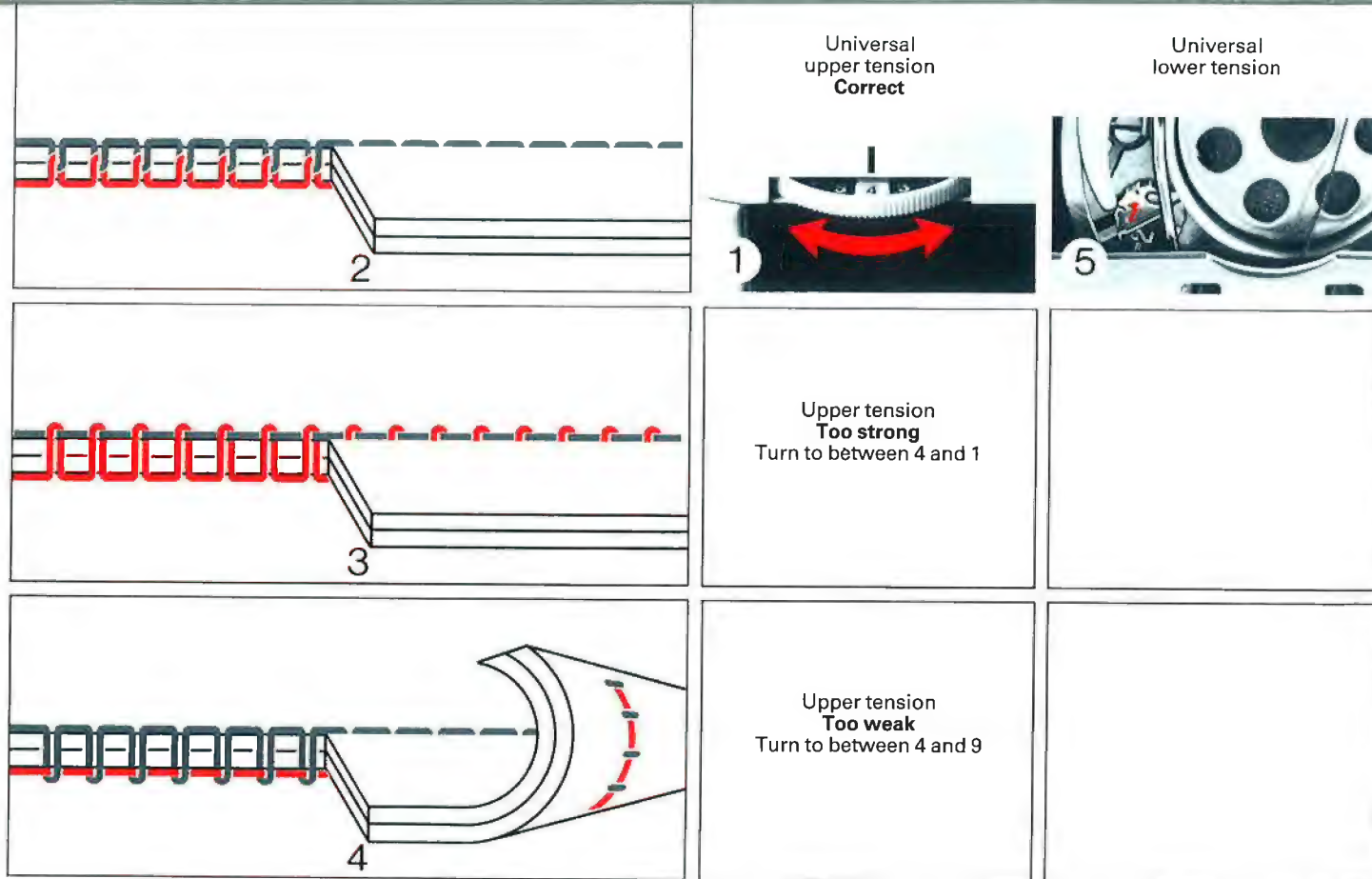
Select the thread according to the type of work and fabric, and the needle according to the thread : Darning, sewing or embroidery thread, depending on the fineness, durability or appearance required of the finished work.

First get used to simple sewing and you will be able to make use of other Elna possibilities with greater confidence, later on.

All ordinary fabrics can be sewn without any problem. For certain synthetic fabrics, stretch fabrics, silk, jersey underwear, etc., it is advisable to decenter the needle to the left. The stitching will be even more regular.

Materials	Threads			Needle Sizes System 130/705H
	Cotton	Silk	Synthetic Fibres	15 × 1 **
Sheer	120-100 *	Sewing	Sewing	60-70 7-10
Worn (darning)	Darning 120-100 *	Darning	Darning	60-70 7-10
Ordinary	100-60 *	Sewing	Sewing	80 12
Medium Weight	80-40 *	Sewing	Sewing	80-90 12-14
Thick Weave Heavy Sheets	40 *	Sewing	Sewing	90-110 14-18

* Sizes may change depending on the country ** Or the system 705



Universal Thread Tensions

The universal tensions make it possible for you to do most of your sewing jobs without needing to change the tension settings. However, don't hesitate to change the thread tensions if this should be necessary (see below):

Upper tension

The figure 4 (white zone) is opposite the guide mark – fig. 1.

Correct tension: the threads are locked properly **in the middle** of the fabrics – fig. 2.

If the tension should have to be changed (nylon or metallic threads, special seams, stiff thread, particularly closely woven fabrics, etc.), it is usually the **upper tension** that is adjusted, by turning the wheel as indicated below:

Upper tension too strong: the lower thread is visible **on top**. Reduce the tension by turning the wheel to between 4 and 1 – fig. 3.

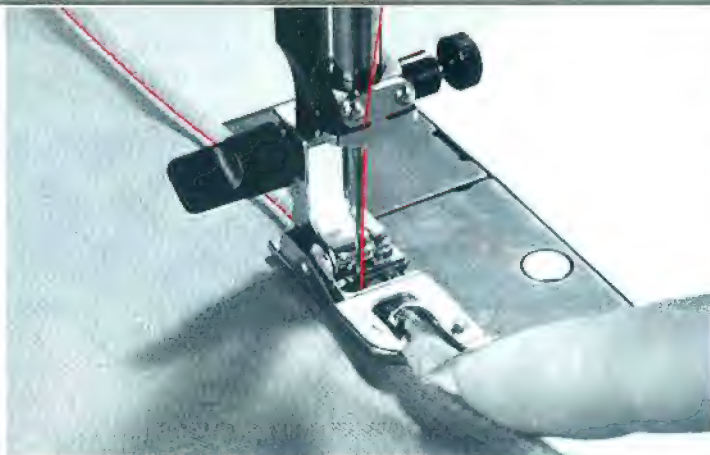
Upper tension too weak: the upper thread is visible **underneath** the material. Increase the tension by turning the wheel to between 4 and 9 – fig. 4.

If the tensions are tried out for a special sewing job, this should be done on a **double** (and not single) layer of a scrap of the material, as will be the case when the actual job is sewn.

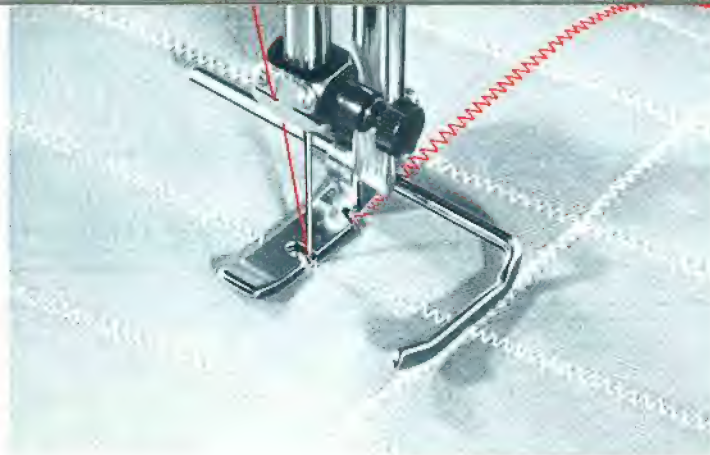
Lower tension

The red figure 1 is facing the lever – fig. 5.

If the lower tension should have to be modified (nylon, gold or silver metallic or elastic thread, hemstitching, etc.), turn the graduated screw to between 0 and 3 with the screwdriver. The graduations on the screw make it easy to re-set the universal tension position 1, marked in red.



J2 426.820, J4 426.830, J6 426.840



S 425.341

Sewing with Extra Accessories

If desired, the already wide range of applications for the Elna can be extended even further with the use of extra accessories that are available from all Elna shops. Simply refer to the respective numbers.

Utilization of Some of the Extra Accessories

Hems

Width $\frac{1}{4}$ ", length 2-3

2 mm ($\frac{1}{16}$ ") : J 2 426.820

4 mm ($\frac{1}{8}$ ") : J 4 426.830

Hemmer Feet J 2, J 4 or J 6

6 mm ($\frac{1}{4}$ ") : J 6 426.840

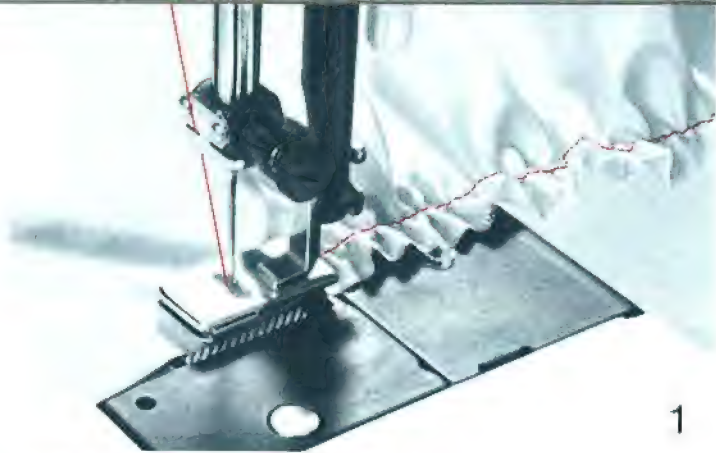
Prepare a hem with a width corresponding to that of the foot (4 mm – $\frac{1}{8}$ ", for example, with the material folded twice over a length of 2 to 4 cm – $\frac{3}{4}$ " to $1\frac{3}{4}$ "). Place it under the foot, lower the foot, sew two or three stitches by turning the flywheel by hand, leave the needle lowered into the material and raise the foot. Pull the hem into the spiral of the foot and then lower the foot again. Sew, guiding the material in such a way that the spiral of the hemmer is always well filled.

Quilting

Quilting Foot with Guide S 425.341 – green $\frac{1}{4}$ ", width 2-4, length 2-3.

Quilting can be done with a straight stitch or the zigzag. Adjust the width and length of the stitch as required. **Always start in the middle of the work.** Sew the first row of stitches and adjust the guide to the distance desired between the seams. (To do so, loosen the screw, adjust the guide and then tighten the screw again). The guide must not press down on the material, as this would prevent the latter from being fed correctly.

Next, sew on one side and then on the other, starting from the middle and working out towards the edges. The layers of padding have a tendency to move and, once sewing has been completed, it will be necessary to cut the edges even. Therefore, allowance must be made for a little more material.



1

U 425.071



2

3



Gathering

Gathering Foot – U 425.071, straight stitch, width “1”, length 3-4.

For big gathering jobs with sheer or fairly fine material, it is preferable to use the gathering foot.

Fig. 1 – Place the material to be gathered under the gathering foot, the same as for ordinary sewing. The gathers will become more pronounced, if the upper tension is increased and the stitches are lengthened.

Fig. 2 – To gather and sew on a flounce at the same time, place it under the foot, from the left. Then insert the top piece of material from the left, into the side slot of the foot, being careful to keep it flat. Lower the needle and sew a few stitches while holding back the ends of the threads. Guide both pieces of material at the same time, while sewing. The top piece of material must be fed regularly into the foot and should not be held back or the stitches will be uneven. Do not hold back the flounce. The material for the flounce must be longer than the main piece of material.

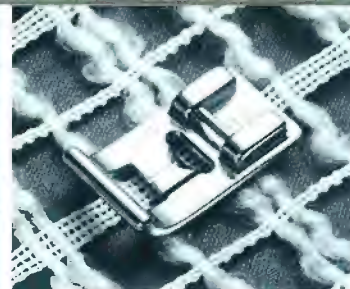
Note: To sew further from the edge, the needle should be decentred to the left. Selector on buttonhole position (blue).



P 425.140



718.308



H 426.800



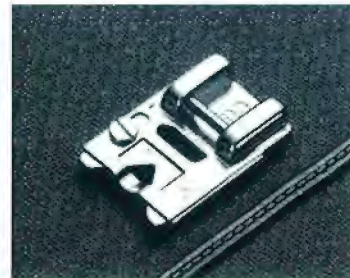
O 425.600



I 426.810



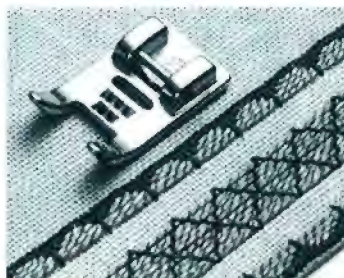
M4 426.960, M6 426.970



K 426.880



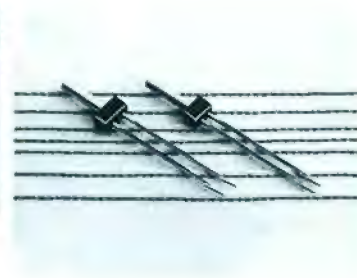
424.061, 424.070, 424.090



L 426.860



G 426.850



2 + 2,7 mm.

Other Extra Accessories

Button Foot with Adjustable Guide – P 425.140

For sewing buttons with a stem on collars, woollens, thick fabrics, etc.

Button Foot – 718.308

For buttons and hooks, curtain rings, etc.

No-snap Foot – H 426.800

For net curtains, shaggy fabrics, curly knitted fabrics, etc.

Foot for Sewing Loops and Tailor Tacks – O 425.600

Useful for embroidering or for marking the fabric with tailor tacks.

Rolled Hem Foot – I 426.810

For making rolled hems with the zigzag stitch. Especially useful for fine handkerchiefs.

Felling Feet: 4 mm (1/8") : M4 426.960

6 mm (1/4") : M6 426.970

For felled seams.

Braiding Foot – K 426.880

For sewing on braid, soutache and cords.

Eyelet Plates 2 mm (1/16") : 424.070

4 mm (1/8") : 424.090

Awl – 424.061

Make it possible to embroider eyelets with diameters of 2 and 4 mm (1/16" and 1/8"). The awl is used for piercing the material to make the holes.

Multiple Cord Foot – L 426.860

As many as five fine cords can be inserted into this foot and sewn with decorative stitches. Very attractive designs can thus be obtained.

Tucker Foot – G 426.850

Tucks are sewn with the twin needle.

Twin Needle 2 or 2,7 mm

For sewing pin-tucks, decorative designs, etc.



426.200



424.620



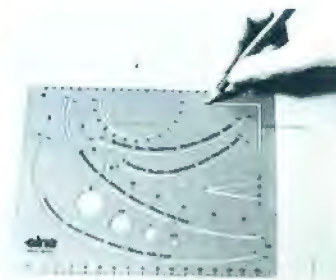
425.901, 425.998



424.970, 424.980



424.630



424.740



Q 425.450



424.990

Darning Plate with Round Hole – 426.200

For particularly fine darning.

Needle Plate for Topstitching – 424.620

Monogram Device – 425.901

For embroidering beautiful monograms on sheets, towels, tablecloths, serviettes, etc.

Set of 6 Stencils – 425.998

Not illustrated.

Embroidery Hoops: 60 mm (2 $\frac{3}{8}$ "') : 424.970

138 mm (5 $\frac{1}{2}$ "') : 424.980

Fork for Rug-making and Fringes – 424.630

Used for making rugs, the topsides of cushions or fringes for certain woollen garments.

Sewing Stencil – 424.740

For drawing and modifying patterns, guide marks, practical and decorative designs.

Embroidery Foot – Q 425.450

Metal foot for sewing satin stitches, decorative stitches, etc.

Finger Protection – 424.990

It is placed above the sewing foot particularly when doing embroidery without a sewing foot.

Not illustrated :

Buttonhole Length Guide – 425.570

For checking the length of buttonholes and for sewing them at the right distance from the edge of the garment.

Teflon-coated Presser Foot – T 425.005

Makes it easier for fabrics to slide under the foot.

Horizontal Spool Pin – 426.760

Useful for very slippery threads which tend to unwind too easily.

Nickel-plated Sewing Foot– 425.001

Particularly suitable for sewing on a large scale—straight stitch, zigzag, overcasting, etc.

Teflon-coated Embroidery Foot – R 425.455

For easy embroidering on plastic and leather.

Cover – 426.730

For covering the machine when sewing is stopped for a moment, when the machine is transported, etc.

Universal Fabric Guide – 426.620

Useful for guiding fabrics in order to sew them at a regular distance from the edge (particularly valuable for wide hems).

Gatherer for Elastic – 426.550 7,5 mm, 426.553 10 mm,

426.556 13 mm

It is used with elastic 7,5 to 13 mm ($\frac{1}{8}$ " to $\frac{1}{2}$ " wide which is stretched automatically as the sewing is done.



Elna Needles

They can usually be obtained from Elna dealers (depending on the country) and are supplied in packs of 5 or 10 needles, depending on the type and size of needle required.

Needles for Ordinary Woven Fabrics –

Type 130/705 H

Universal needles with a tiny ball point to avoid damaging the fibres.

Size 60 – for very sheer fabrics and very fine threads – Batiste, voile, chiffon, silk, very light synthetic fabrics.

Size 70 – for sheer fabrics and fine threads – Batiste, georgette, cotton, jersey for underwear, lace, hosiery, organdie, light synthetic fabrics – darning, overcasting, etc.

Size 80 – for medium fabrics and threads – Cotton, woollens, silk, taffeta, velvet, poplin, material for garments, blouses, shirt-waisters, synthetic fabrics – darning, overcasting, etc.

Size 90 – for medium-heavy fabrics and medium-thick thread – Woollens, material for garments, piqué, flannel, poplin, costumes, working clothes, heavy linen, synthetic fabrics.

Size 100 – for heavy fabrics and thick threads – Material for garments, woollens, coats, jackets, working clothes, heavy linen, canvas, tweed, furnishing fabrics.

Size 110 – for heavy fabrics and thick threads and for hemstitches and fine threads – Material for garments, woollens, coats, heavy linen.

For hemstitches with Elna stitches and darning thread.

Assortment of needles, sizes 70 to 90 – for the general range of ordinary fabrics.

Needles for Knitted and Stretch Fabrics – Type 130/705 H-S

Needles with a ball point and a special shape, which separate the fibres of the material without damaging them, for tricot, jersey and other knitted fabrics with stitches.

Size 80 – for medium-sheer jersey, nylon, underwear.

Size 90 – for knitwear, medium jersey, Helanca, Lycra, jersey fabrics for garments.

Size 100 – for jersey clothing, knitwear, stretch fabrics for sportswear, pullovers, jackets, etc.

Needles for Denim – Type 130/705 H-J

Needles with a special shaped point for facilitating penetration into hard and tightly woven fabrics.

Size 90 – for medium denim fabrics.

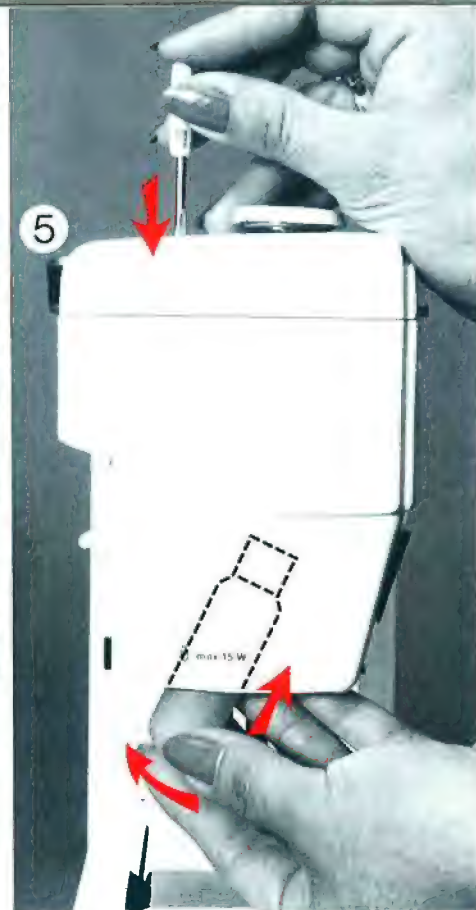
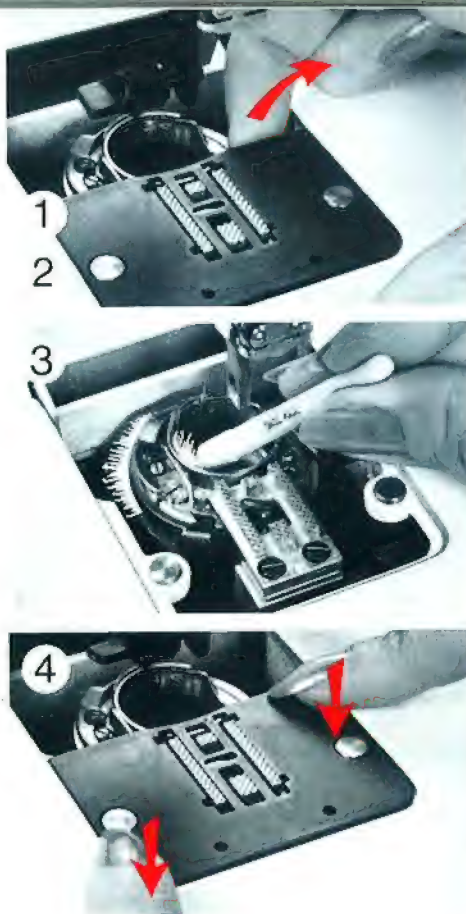
Size 100 – for heavy denim fabrics, trousers, skirts, certain synthetic fabrics.

Needles for Leather and Plastic – Type 130/705 H-LL

Needles with a cutting point. Stitch length : 2½ min.

Don't use them for sewing textiles as they would damage the fabric's fibres or mesh.

Size 90 or 100 – for soft leather, suède, calf leather, imitation leather, garment reinforcements, etc.



Part IV

Maintenance

Disconnect the machine from the mains before carrying out any maintenance or changing the sewing light bulb.

Careful maintenance guarantees the trouble-free performance of the machine. At regular intervals, remove bits of thread and fabric that remain in the rotary hook.

Rotary Hook

- 1-2 After having removed the foot support, needle and needle plate, brush the feed dog.
- 3 Next, insert the brush in the middle of the rotary hook and move the brush about so that its bristles protrude through the openings in the side of the rotary hook. Oil after cleaning (see page 8).
- 4 Put the needle plate back, press on it until it clicks into place. Close the rotary hook cover.

Sewing Light

- 5 Press down with the screwdriver to make the bulb protrude below the casing. It has a bayonet socket. Push in the bulb, turn it (in the direction of the arrow) and remove it. To fit a new bulb, proceed in the reverse order. **Note the bulb's inclined position.** Input of the bulb, 15w max. Remember this, if you should have to replace it. The input of the bulb is also indicated on the head of the machine, at the left. Make sure, too, that the voltage is correct.

To Remedy Minor Disorders

Follow the advice given or consult the instruction manual on the pages indicated.

The upper thread breaks

	Pages
Needle is not of the 130/705 H or 705 (15×1) system. It is of poor quality, bent, not inserted properly (wrong way round or not pushed in far enough), not suitable for the work.	6, 28, 35
Upper tension too tight	13, 29
Darning thread – choose a thread with a left twist.	
Threading not correct, thread dry or of poor quality	10-11, 28
Size of thread not suitable for the work	28
Needle not right for the kind of thread or work	28, 35
Machine needs cleaning	36
Remove the needle plate and foot and check their condition (damaged slits, possibly to have polished by your Elna dealer)	

The lower thread breaks

Thread not wound evenly on the bobbin or not drawn up correctly (does not cross the bobbin correctly)	8-9, 12
Lower tension too strong.	29

The machine skips stitches

Machine not threaded correctly	9-11
Needle not suitable for the thread or work.	35
Sewing foot not suitable for the work	
Needle is not of the 130/705 H or 705 (15×1) system. It is of poor quality, bent, not inserted correctly (wrong way round or not pushed in far enough), not suitable for the work.	6, 28, 35
Thread too coarse in relation to the needle or too stiff ...	28, 35
Thread not wound evenly on the bobbin, bobbin inserted upside down	8-9
Thread of poor quality; uneven thickness	28, 35
Use a 130/705 H-S (stretch) needle for stretch fabrics	35

The motor runs but the machine does not

Press the coupling hub button	8
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The motor does not run

Safety switch not turned on.	8
Air foot control has not been connected properly (disconnect then reconnect)	
Foot control tube is jammed (under a chair leg, for example)	
Mains lead not connected properly	

The machine stops – remains of thread in the rotary hook

Remove the needle, foot, bobbin and needle plate. Turn the flywheel by hand in a series of short movements, first backwards then forwards, until the thread tangle has been cut. Clean out the remains of thread, oil the rotary hook and run the machine without thread for a short time.	36
Check the upper threading	10-11

The stitch selector is hard to turn

Turn the stitch width dial to "1"	14-15
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The automatic buttonhole does not work

Foot not suitable for the work.	
The stitch selector, stitch width and length dials have not been set at the buttonhole position, blue mark/symbol.	
If the stitches of the sides are too close or too open, see page.	21
Thread tensions incorrect or not properly adapted	29
Use a 130/705 H-S (stretch) needle for stretch fabrics.	

The material puckers

Upper and/or lower tensions too strong.	29
Stitch too long, thread too thick	
Thread not drawn up correctly, does not cross the bobbin properly	12

Very thick material is sewn badly

Lower the cloth presser bar lever

The material is fed unevenly

Needle plate not fitted correctly	
Feed dog clogged with dirt	36
Sewing foot not suitable for the work.	
Stitch length not suitable.	

The needle breaks

By pulling the material, the needle hits the foot or the needle plate.	
Needle is not of the 130/705H or 705 (15×1) system. It is of poor quality, bent, not inserted correctly (wrong way round or not pushed in far enough), not secured firmly, not suitable for the work	6, 28, 35
The thread has knots	
If the needle hits the darning or needle plate, turn the stitch width the length dial to "1", dial to "0" and the stitch selector to "1".	
Upper tension too strong.	29
If the needle hits the darning or needle plate, turn the stitch width dial to "1", the stitch length dial to "0" and the stitch selector to the desired stitch.	

The needle is caught in the material

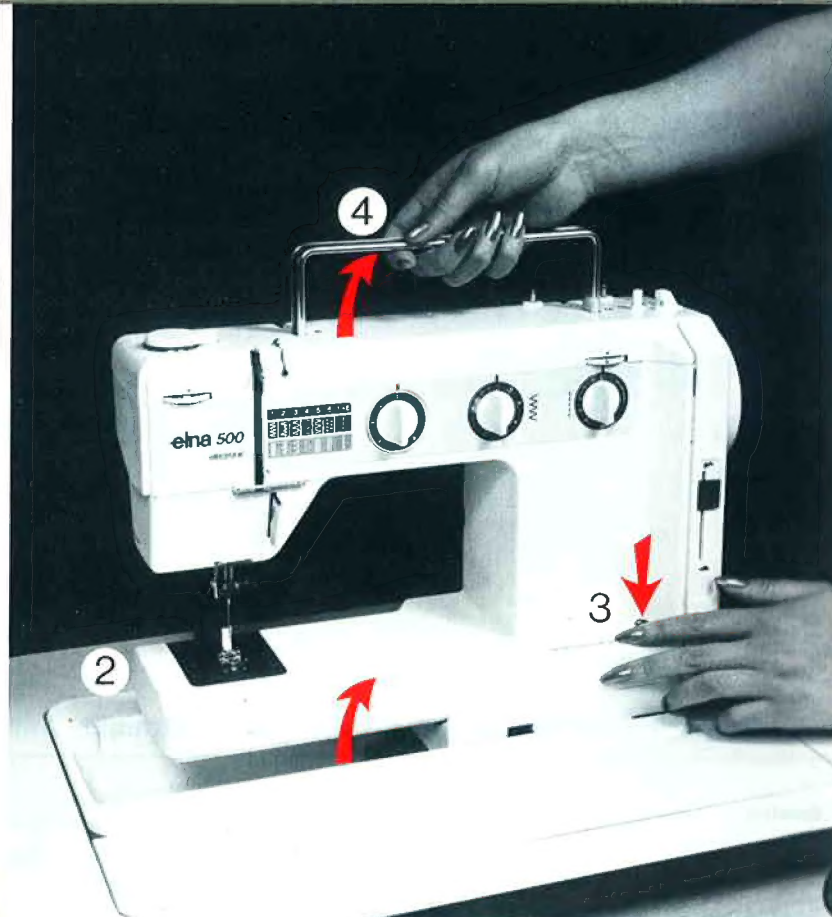
The motor continues to hum for several seconds, even if the foot control is no longer depressed: Cut off the current by means of the safety switch. Free the needle by turning the flywheel by hand, with short movements backwards and forwards. Raise the needle to its highest position.

The machine runs too slowly

Slide the electronic speed reducer knob to the hare symbol.	
The nozzle of the foot control has not been connected properly or the air tube is jammed (under a chair leg, for example)	8

The machine is noisy

Rotary hook not oiled or clogged with lint	8, 36
The needle is blunt; change it	



The Elna 500 duplex electronic, cl. 46 has been designed to be built into a cabinet

Apart from the few exceptions and additional instructions mentioned below, the information given in the instruction manual for the portable Elna 500 electronic, cl. 45 model is also valid for the cl. 46 model.

- 1 Once fitted into a cabinet, the Elna 500 duplex electronic, cl. 46 machine resembles any other built-in, flat-bed sewing machine, ready for everyday sewing and, above all, for sewing large items.
- 2 The free arm can be released
- 3 by pressing the free-arm release button with the finger and
- 4 by lifting the machine with the other hand with a slightly circular movement. A stabilizing mechanism is automatically engaged and locks the machine in the high/free arm position.
- 5 To lower the machine again, grasp the handle of the machine, press the button and lower it carefully.

Note: The Elna 500 duplex electronic, cl. 46, can also be turned inside any cabinet provided with an opening for this purpose.

Preparing the Machine for Sewing with Straight, Automatic and Superautomatic Stitches

Sewing		Feet	Needles *		Upper Thread Tension	Stitches	
			System 130/705 H No.	Former		Width	Length
Sewing with straight stitches *	---	Sewing foot A	70/80/90	9/14	3½-4½ **	---	1-4
Green automatic stitches	Stitch selector on :						
Zigzag	AAA	Sewing foot A	70/80/90	9/14	3½-4½ **	2-4	1-3
Fast overcasting	AAA	Sewing foot A	70/80/90	9/14	3½-4½ **	2-4	1-3
Special overcasting	AAA	Sewing foot A	70/80	9/12	3½-4½ **	2-4	½-¾
Elastic blind stitch	AAA	Blind stitch foot E	80	12	3½-4½ **	2-4	1-2
Blind stitch	AAA	Blind stitch foot E	80	12	3½-4½ **	2-4	2-3
Shell stitch	AAA	Embroidery foot B	70/80	9/12	3½-4½ **	4	2-3
Interlock	AAA	Sewing foot A	80	12	3½-4½ **	2-4	1-1½
Satin stitch	AAA	Embroidery foot B	70/80	9/12	3½-4½ **	2-4	1/3-1/4
Buttonhole	□	Buttonhole foot C	80	12	3½-4½ **	□ 2, 3, 4	□
Buttons *	AAA	Embroidery foot B	80	12	3½-4½ **	2-4	0
Red superautomatic stitches							
Overlock	XXXX	Sewing foot A	70/80	9/12	3½-4½ **	3-4	S
Superstretch stitch	XXX	Embroidery foot B	80/90	12/14	3½-4½ **	3-4	S
Tricot stitch	XXX	Embroidery foot B	80/90	12/14	3½-4½ **	4	S
Elastic triple seam	===	Embroidery foot B	80/90	12/14	3½-4½ **	---	S
Jersey stitch	SSS	Sewing foot A	70/80	9/12	3½-4½ **	4	S
Rickrack stitch	AAA	Embroidery foot B	80/90	12/14	3½-4½ **	4	S
Triple zigzag	AAA	Embroidery foot B	80/90	12/14	3½-4½ **	2-4	S
Decorative stitch	AAA	Embroidery foot B	80/110	12-18	3½-4½ **	2-4	S
Darning	---	Darning foot N	70/80	9/12	2-3	---	0
Decorative darning	---	Darning foot N	60/70	7/9	2-3	2-3	0
Sewing with a twin needle	---	Sewing foot A	70/80	9/12	3½-4½ **	0-2	1-4 ou S
	AAA	or Embroidery foot B					

* Decentre the needle to the left if very sheer or soft fabrics, as well as buttons, are being sewn.

** Universal. S=Setting at "S" position (Superautomatic).

